Supreme Court, U.S.
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No. _____

In the Supreme Court of the United States

TEXAS COMMITTEE ON NATURAL RESOURCES,
Petitioner,

v.

ANN VENEMAN, IN HER OFFICIAL CAPACITY AS THE SECRETARY OF THE DEPARTMENT OF AGRICULTURE, et al.,
Respondents.

On Petition For Writ Of Certiorari To The United States Court of Appeals For The Fifth Circuit

PETITION FOR WRIT OF CERTIORARI

Mary A. Van Kerrebrook *
Wilson, Cribbs, Goren & Flaum, P.C.
440 Louisiana, Ste. 2200
Houston, Texas 77002
(713) 547-8506

Thomas B. Cowart
Law Offices Of Windle Turley, P.C.
6440 N. Central Expressway
Ste. 1000
Dallas, Texas 75206
(214) 691-4025

Counsel for Petitioner

* Counsel of Record

BECKER GALLAGHER LEGAL PUBLISHING, INC.,
CINCINNATI, OHIO 800-890-5001

QUESTIONS PRESENTED

1. Whether a citizen suit to enforce the substantive constraints on the carrying out of timber harvests under the National Forest Management Act (NFMA), which pleads the existence of final timber sales, fails to state a final agency action because some of the evidence and relief are broader than the specific timber sales pled.

2. Whether there is no citizen-suit redress for Forest Service violation of NFMA's substantive constraints on the carrying out of timber harvests, because the only potential evidence – from other representative harvests – may not be considered by trial courts.

3. Whether harvesting is a final agency action sufficient to confer jurisdiction on the district court under section 704 of the Administrative Procedures Act, in a suit seeking enforcement of NFMA's substantive constraints on harvesting.

4. Whether all of the relief granted by the district court in a citizen suit for violation of NFMA should be reversed when a district court grants relief broader than the final agency actions pled, or solely the portion of the relief which exceeds the scope of the final agency actions shown.

PARTIES TO THE PROCEEDING

Petitioners

The Texas Committee on Natural Resources (TCONR). TCONR is a non-profit organization, which neither issues stock nor has any parent corporations.

The Sierra Club and the Wilderness Society were also plaintiffs.

Respondents

The United States Forest Service and officials of the United States Forest Service and Agriculture Department, in their official capacity: Ann Veneman, Secretary of the Department of Agriculture, Elizabeth Estill, Regional Forester for the United States Forest Service, Region 8; Michael Dombeck, Chief of the United States Forest Service, and Ronald Raum, Forest Supervisor for National Forests and Grasslands in Texas.

The Texas Forestry Association and the Southern Timber Purchasers Council (Timber Intervenors) are Respondents/Intervenors in this action.

TABLE OF CONTENTS

QUESTIONS PRESENTED i

PARTIES TO THE PROCEEDINGS ii

TABLE OF CONTENTS iii

TABLE OF AUTHORITIES v

OPINIONS BELOW 1

JURISDICTION 1

STATUTES AND REGULATIONS INVOLVED 1

STATUTORY BACKGROUND 1

STATEMENT OF THE CASE 3

REASONS FOR GRANTING THE PETITION 11

CONCLUSION 18

APPENDIX

Appendix A
Court of Appeals Opinion, 9/20/00,
Sierra Club v. Peterson, 228 F.3d 559
(5th Cir. 2000) 1a

Appendix B
Court of Appeals Opinion,8/16/99,
Sierra Club v. Peterson, 185 F.3d 349
(5th Cir. 1999) 34a

Appendix C
District Court Memorandum Opinion,
Order, and Injunction, 8/14/97,
Sierra Club v. Glickman, 974 F. Supp. 905
(E.D. Tex. 1997) 100a

Appendix D
Court of Appeals Order on Petition for
Rehearing, 11/21/00 . . . . . 199a

Appendix E
Statutes and Regulations Involved 201a
16 U.S.C § 1604(a)-(k) 201a
36 C.F.R. § 219 (pertinent sections) . 209a

Appendix F
Transcript of District Court Bench
Trial (Excerpted), 4/2/96 . . . . . 231a

TABLE OF AUTHORITIES

Cases **Page(s)**

Bennett v. Spear,
520 U.S. 154, 137 L.Ed.2d 281,
117 S.Ct. 1154 (1997) 15

Lujan v. National Wildlife Federation,
497 U.S. 871, 111 L. Ed. 2d 695,
110 S. Ct. 3177 (1990) . . . . . *passim*

Ohio Forestry Association v. Sierra Club,
523 U.S. 726, 140 L.Ed.2d 921,
118 S.Ct. 1665 (1998) 11, 12, 13, 16, 18

Sierra Club v. Espy,
38 F.3d 792 (5th Cir. 1994) 4

Sierra Club v. Glickman,
974 F. Supp. 905 (E.D. Tex. 1997) . . . . . *passim*

Sierra Club v. Peterson,
185 F.3d 349 (5th Cir. 1999) 8

Sierra Club v. Peterson,
228 F.3d 559 (5th Cir. 2000) . . . . . *passim*

Statutes

Administrative Procedure Act 3, 12
5 U.S.C. § 702 3
5 U.S.C. § 704 3

Endangered Species Act
16 U.S.C. § 1531 *et seq.* 4

National Forest Management Act . . . . . i, 1
16 U.S.C. § 1604(g)(3)(F)(v) 2
16 U.S.C. § 1604(g)(1)(B) 3
16 U.S.C. § 1604(g)(3)(C) 3

28 U.S.C. § 1254(1) 1

National Environmental Policy Act
42 U.S.C. § 4321 *et seq.* 4

Regulations:

36 C.F.R. § 219 1

36 C.F.R. § 219.19 3

36 C.F.R. § 219.27 3

PETITION FOR A WRIT OF CERTIORARI

TCONR petitions for a writ of certiorari to review the judgment of the United States Court of Appeals for the Fifth Circuit.

OPINIONS BELOW

The en banc opinion of the court of appeals was published at 228 F.3d 559 (5th Cir. 2000), and is reprinted in the Appendix ("App.") at 1a. The panel opinion of the court of appeals was published at 185 F.3d 349 (5th Cir. 1999) and is reprinted in the Appendix at 34a. The decision of the district court was published at 974 F. Supp. 905 (E.D. Tex. 1997) and is reprinted in the Appendix at 100a.

JURISDICTION

The judgment of the court of appeals was entered on September 20, 2000. (App. 1a.) The court of appeals denied rehearing on November 21, 2000. (App. 199a.) The jurisdiction of this Court is invoked under 28 U.S.C. § 1254(1).

STATUTES AND REGULATIONS INVOLVED

The relevant sections of the National Forest Management Act, 16 U.S.C. § 1604, and operative regulations, 36 C.F.R. § 219, are set forth in the Appendix at 201a and 209a, respectively.

STATUTORY BACKGROUND

The National Forest Management Act (NFMA) governs the actions and procedures of the United States Forest

Service in the publicly owned forests of the United States. Clearcutting, or "even aged management,"[1] results in the removal of almost all above-ground woody vegetation. *Sierra Club v. Glickman*, 974 F. Supp. at 925. Two NFMA requirements are in issue here. First is the requirement that even-aged harvesting be carried out consistent with (a) soil and (b) watershed protection. NFMA contains several substantive limitations on the use of even-aged management in National Forests. In pertinent part, NFMA and its regulations require the Forest Service to:

> insure that clearcutting, seed tree cutting, shelterwood cutting, and other cuts designed to regenerate an evenaged stand of timber will be used as a cutting method on National Forest System lands only where–
>
> > (v) such cuts are carried out in a manner consistent with the protection of soil, watershed, fish, wildlife, recreation, and esthetic resources, and the regeneration of the timber resource.

16 U.S.C § 1604(g)(3)(F)(v). (App. E at 206a). The regulations provide:

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[1] Variations on clearcutting, also included under the description of "even-aged management," are seed-tree and shelterwood cutting. NFMA's substantive requirements for even-aged practices encompass all of clear-cutting, seed-tree and shelterwood harvesting. *See, e.g.* 16 U.S.C.§ 1604 (g)(3)(F)(v).

§ 219.27 Management requirements.

(A) Resource protection. All management prescriptions shall–
(1) Conserve soil and water resources and not allow significant or permanent impairment of the productivity of the land; . . . .

(4) Protect streams, streambanks, shorelines, lakes, wetlands, and other bodies of water. . .

36 C.F.R. § 219.27. (App. E at 221a-229a.)

The second NFMA provision in issue concerns inventorying and monitoring. In order to determine the effects of its harvesting and other activities, the Forest Service is required to select, inventory, and monitor the populations and population trends of Management Indicator Species--forest-living species whose populations are affected by the health of the forest. 16 U.S.C. § 1604(g)(1)(B) and (3)(C); 36 C.F.R. § 219.19. (App. E at 217a-219a.)

NFMA does not contain independent citizen-suit provisions. Suits to enforce NFMA are brought under the citizen-suit provisions of the Administrative Procedure Act (APA), 5 U.S.C. §§ 702, 704. "Agency action made reviewable by statute and final agency action for which there is no other adequate remedy in a court are subject to judicial review." 5 U.S.C. § 704.

STATEMENT OF THE CASE

This Petition arises from the Fifth Circuit's en banc reversal, in a split opinion, of both its panel opinion and of the district court's judgment. Plaintiffs filed this lawsuit

under several statues, including the Endangered Species Act, 16 U.S.C. § 1531 *et seq.*, the National Environmental Policy Act, 42 U.S.C. § 4321 *et seq.*, and NFMA. Earlier trials addressed other statues. That at bar addressed the substantive NFMA claims.[2] Plaintiffs' operative pleadings asserted that the Forest Service was not carrying out its timber harvesting consistent with NFMA and its regulations' provisions on soil and watershed protection, and was failing to monitor Management Indicator Species as the law required. Plaintiff followed several proposed timber sales through the administrative process. When the Forest Service denied these appeals, the then-ripe timber sales were pled in Plaintiffs' Fourth Amended Complaint of May 8, 1992. An additional sixteen timber sales were raised by Plaintiffs' Supplemental Complaint on Even-Age Claim to Fourth Amended Complaint of April 27, 1995. *Sierra Club v. Peterson*, 228 F.3d at 563-64, 572.

By the time of trial on the substantive NFMA claims, one of the pled timber sales, Compartment 98,[3] had been harvested. The other sales were not harvested by the trial date, but remained ripe and pending. Clearly, no evidence

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[2] The district court had earlier reviewed the question of whether nine of the timber sales in issue complied with the procedural requirements of NFMA. The district court found that the Forest Service's procedural findings were inadequate, and entered a temporary injunction against the sales. The Fifth Circuit reversed and remanded. *Sierra Club v. Espy*, 38 F.3d 792 (5th Cir. 1994). These nine sales were then among the sales considered for substantive compliance with NFMA's harvesting requirements in the trial at bar.

[3] A compartment is an administrative unit of a National Forest. *Sierra Club v. Glickman*, 974 F. Supp. at 918.

could be presented on the "carrying out" of specific compartment harvests that had not yet occurred. The Forest Service and Timber Interveners therefore chose to focus their harvesting evidence on Compartment 98, telling the trial court that Compartment 98 was "not arbitrarily chosen," because timber management and harvesting in this compartment were "generally typical" of even-age sales in the Texas National Forests, and that they would point out any ways in which the Compartment 98 management and harvest differed from that of other compartments.[4] (App. 232a-233a, Opening Statement for Federal Defendants.) The district court accepted defendants' representations on these points. *Sierra Club v. Glickman*, 974 F. Supp. at 918. (App. 119a.) Plaintiffs also presented evidence on the Compartment 98 harvest, and other site-specific evidence from the National Forests in Texas.

The testimony and exhibits demonstrated overwhelming violations of laws and regulations in Compartment 98 and throughout the Texas National Forests. *Sierra Club v. Glickman*, 974 F. Supp. at 924-29. (App. 144a-148a.) The district court found as to the watershed resources that "Forest Service management practices . . . are causing substantial and permanent (1) erosion within waterways, (2) deposit of soil, silt, and sedimentation in waterways, and (3) disruption of water run-off." *Id.* at 928. (App. 149a.) The violations occur throughout the National Forests in Texas. *Id.* They are "causing irreversible damage to the watershed resource." *Id.* The trial court found that

---

[4] Neither the Forest Service nor Timber Intervenors ever later made any distinctions between this harvest and any others, nor did they attempt to withdrew their claim that the harvest was "typical."

"whatever the Forest Service planning documents prescribe with respect to protection of watersheds, the evidence shows that, on-the-ground, the Forest Service is not protecting or conserving the watershed resource." *Id.* at 929. (App. 151a.)

On the soil claims, the trial court found that even-aged timber harvesting was causing topsoil loss, and greatly increased soil and water run-off, which in turn irreversibly displaces nutrient-rich soil. *Id.* at 924-26. (App. 139a-144a.) These practices also cause loss of nitrates and organic matter, which are essential for soil's long-term productivity. *Id.* The organic matter, once lost, does not return for hundreds or in some cases thousands of years. *Id.* These practices also cause dramatic losses of essential soil fungi and bacteria: Five years after an even-aged harvest, only one percent of essential fungi and bacteria remain in the soil. *Id.* Again, the trial court found that "whatever the Forest Service planning documents prescribe with respect to protection of soil, the evidence shows that, on-the-ground, the Forest Service is not protecting the soil resource." *Id.* at 926. (App. 144a.)

On the monitoring claims, it was uncontroverted that the Forest Service did no on-the-ground monitoring on most Management Indicator Species, but simply ran some numbers on a computer program. *Id.* at 932. The evidence included the Forest Service's own internal Five Year Review which states:

> ***Important Note*: HABCAP does not or should not be used to derive wildlife target projections, populations, or estimates. Many other factors effect populations that are not considered within HABCAP. HABCAP merely serves to assess the potential for a

> specific population based on habitat availability in an area. The value of actual population monitoring for effectiveness or validation of assumptions in land management cannot be stressed enough as to its importance in the overall [management indicator] process.
>
> . . . .On [the National Forests in Texas], some HABCAP values have been used that were developed on the Chatahoochee-Oconee. This information has limited reliability for east Texas.

Sierra Club v. Glickman, 974 F. Supp. at 932-33. (App. 161a.)

The district court found that the Forest Service's on-the-ground "failure to adequately inventory and monitor may be causing permanent and substantial damage to the productivity of the land. Without adequate inventorying and monitoring, the Forest Service cannot determine the effects of its management activities on the forest resources." *Id.* at 941. The Forest Service did not dispute the trial court's findings on inventorying and monitoring. In addition to admitting that it had not monitored for Management Indicator Species over the more than two decades since NFMA became law, the Forest Service did not intend to do so in the future. *Id.* 931-33. (App. 159-163a.) This failure violated both NFMA and its regulations, and ignored both of the Forest Service's own 1987 and 1996 Long Range Management Plans (LRMPs), as the trial court found. *Id.* at 944. The district court therefore found for the plaintiffs, enjoining further timber harvesting in the Texas National Forests until the Forest Service complied with NFMA. *Id.* at 945.

The Fifth Circuit panel majority affirmed on August 16, 1999. *Sierra Club v. Peterson*, 185 F.3d 349 (5th Cir. 1999). (App. B at 34a-99a.) The panel dissent claimed that no timber sales had been pled, and therefore would have held that no final agency action was asserted by the plaintiffs:

> It is also important to describe what the Environmentalist Groups' complaint alleges. The Environmentalist Groups have not challenged a site-specific timber sale.

Sierra Club v. Peterson, 185 F.3d at 375 (Garza, J. dissenting). (App. B at 87a.) En banc rehearing was granted on January 21, 2000 on the sole question of whether the plaintiffs had stated a final agency action sufficient to confer jurisdiction. *Sierra Club v. Peterson*, 228 F. 3d at 561.

On September 20, 2000, the en banc court reversed the panel opinion. The court acknowledged that the plaintiffs ***had*** alleged the twenty-eight timber sales ("The [Fourth Amended Complaint of the] environmental groups cited twelve allegedly ripe and allegedly improper timber sales in support of this claim . . . . Although the Supplemental Complaint identified "18 [scheduled] even-age cutting decisions." *Id.* at 563-64. (App. 6a, 9a.) Citing *Lujan v. National Wildlife Federation*, 497 U.S. 871, 110 S. Ct. 3177, 111 L. Ed. 2d 695 (1990), the court held that these timber sales were not final agency action because the evidence and relief were broader than those twenty-eight sales:

> Rather than limit their challenge to individual sales, they merely used these sales as evidence to support their sweeping argument that the Forest Service's "on-the-ground" management of the Texas forests over the last twenty years

> violates the NFMA. This is clear from their allegations, which addressed the entire Texas forests, from their evidence, which concerned practices throughout the Texas forests and which dated back to implementation of the NFMA, and from their requested relief.

Id. at 567. (App. 17a.)

> The scope of the environmental groups' claims and the relief they obtained go well beyond any challenge to discrete sales. Both make clear that the environmental groups improperly obtained "a general judicial review of the [Forest Service's] day-to-day operations." *Lujan*, 497 U.S. at 899, 110 S. Ct. 3177

Id. (App. 18a.)

The en banc dissent would have held that final agency actions were alleged:

> The majority does not dispute that in the Fourth Amended Complaint, and the "Supplemental Complaint"the plaintiffs cited specific timber sales and actions taken by the Forest Service which they alleged violate the NFMA. It appears that the majority's central argument is that the plaintiffs' pleadings also contain general allegations regarding the Forest Service's even-aged management and clearcutting practices. The majority is suggesting that the use of these general allegations dilutes or negates the existence of the plaintiffs' specific allegations challenging

specific timber sales and specific decisions made by the Forest Service.

Lujan does not prohibit plaintiffs from combining both general and specific allegations in their complaint, instead *Lujan* simply requires that a plaintiff must direct its attack against "some particular 'agency action' that causes it harm." *Id.* The Supreme Court stated that the purpose of requiring a plaintiff to challenge a specific agency action is to insure that "the scope of the controversy has been reduced to more manageable proportions, and its factual components fleshed out, by some concrete action applying the regulation to the claimant's situation in a fashion that harms or threatens to harm him." *Id.* In the present action, the plaintiffs allegations fit squarely within these parameters. The plaintiffs in the Fourth Amended Complaint, their Request for Trial, and their Supplemental Complaint listed the specific compartments where the Forest Service allegedly violated the NFMA through its clearcutting, timber harvesting, and even-age logging practices. The plaintiffs were able to reduce their more general allegations to a manageable proportion that allowed the district court to conduct a bench trial on specific compartments of land in the Texas forest. Contrary to the intimation of the majority opinion, the experienced trial judge below was not oblivious to the parameters of *Lujan* when he embarked on the trial at issue. *See Sierra Club v. Glickman,* 974 F.Supp. 905, 914.

Sierra Club v. Glickman, 228 F.3d at 573 (Stewart, J., dissenting). (App. 30-31a.) Petitioners filed a timely Motion for Rehearing, which was denied on November 21, 2000. (App. 199-200a.)

REASONS FOR GRANTING THE PETITION

1. The court of appeals' decision is directly inconsistent with this Court's decision in *Ohio Forestry Association v. Sierra Club*, 523 U.S. 726 (1998). *Ohio Forestry* addressed the question of when a Forest Service action is final and ripe for a NFMA suit. *Ohio Forestry* was a challenge to "the lawfulness of a federal land and resource management plan adopted by the United States Forest Service for Ohio's Wayne National Forest on the ground that the plan permits too much logging and too much clearcutting." *Id.* at 728. No specific timber sales were pled by the plaintiff. The plan set logging goals, and determined which "probable" methods of timber harvest were appropriate, but "it [the plan] does not itself authorize the cutting of-any trees." *Id.* at 729. The Court carefully reviewed the plaintiff's live pleading at the time of trial, its Second Amended Complaint, and described the law and facts alleged in it. *Id.* at 731. The Second Amended Complaint did not allege the existence of any final timber sales, nor did it allege any other imminent harm.

In analyzing whether a final agency action had occurred, the Court focused on the question of harm to the plaintiff. The Court wrote that the provisions of the plan in issue:

> do not command anyone to do anything or to refrain from doing anything; they do not grant, withhold, or modify any formal legal license, power or authority; they do not subject anyone

> to any civil or criminal liability; they create no legal rights or obligations. ***Thus, for example, the Plan does not give anyone a legal right to cut trees, nor does it abolish anyone's legal authority to object to trees' being cut.***

Id. at 733 (emphasis added). Timber sales do just that, and suffice to confer ripeness:

> Nor have we found that the Plan now inflicts significant practical harm upon the interests that the Sierra Club advances–an important consideration in light of this Court's modern ripeness cases. [B]efore the Forest Service can permit logging, it must focus upon a particular site, propose a specific harvesting method, prepare an environmental review, permit the public an opportunity to be heard, ***and (if challenged) justify the proposal in court.*** The Sierra Club thus will have ample opportunity later to bring its legal challenge at a time when harm is more imminent and more certain.

Id. at 733-34 (citations omitted)(emphasis added). The Court held that such a timber-sale based challenge might also seek broader relief: "Any such later challenge might also include a challenge to the lawfulness of the present plan . . . ." *Id.* at 734.

Ohio Forestry is a logical application of this Court's holding in *Lujan* to the NFMA context. *Lujan* established the standing requirements for those complaining under the Administrative Procedure Act of a federal agency's environmental law violations. Plaintiffs must show that they

fall within the "zone of interests" sought to be protected by the statute, and a final agency action. *Lujan*, 497 U.S. at 882-83. *Lujan* also expressly authorizes challenges if an agency's action applies "some particular measure across the board to all individual classification terminations and withdrawal revocations . . ." as long as the action is final. *Id.* at 890, n.2.

Neither *Lujan* nor *Ohio Forestry* states that all evidence must be restricted exclusively to the final agency action. Neither case holds that if the scope of the evidence or pleadings go beyond the final agency actions ultimately determined to exist, then all relief granted by the trial court must be reversed, even as to those final agency actions.

The court of appeals recognizes that timber sales decisions are final agency actions: ". . . the environmental groups still may challenge discrete site-specific sales allowed by the Forest Service." *Sierra Club v. Peterson*, 228 F.3d at 568. However, the court does not explain how challenges to the "carrying-out" of harvesting requirements can be supported under the court's prohibition of any evidence of Forest Service harvesting practices. Under *Ohio Forestry*, such challenges are properly brought at the timber sale decision stage. Of course, parties cannot introduce evidence of how a yet-to-be conducted harvest will be carried out, because that evidence does not exist yet. The only possible method of proof is evidence of how other harvests have been carried out. A district court's reliance on such proof is especially compelling when, as here, the Forest Service represented to the district court that these harvests were "typical" of harvesting methods and results.

2. Since there can be no evidence on the harvesting of the challenged compartments, because the challenged harvests are

not yet conducted, the court of appeals holding effectively forecloses redress for *any* violation of NFMA's substantive harvesting requirements. Although the Fifth Circuit disclaims this intention, the practical effect of its decision is just that: If allowed to stand, the court of appeals' opinion essentially puts the Forest Service's continued and serious violations of NFMA in the implementation of the timber sales beyond the reach of any court.

This result springs from two aspects of the Fifth Circuit's opinion. First, the court characterizes any challenge to activities which are repeated or typical of the Forest Service's management of the National Forests throughout Texas as a prohibited "programmatic challenge," by defining "on-the-ground" violations as those that occur "throughout the Texas forests." *Sierra Club v. Peterson*, 228 F.3d at 567. Second, the court limits the evidence that a plaintiff can use to prove NFMA violations to that relating to the specific timber sale being challenged, prohibiting the prospective prevention of violations in the *implementation* of the sales and allowing only challenges mooted by the completion of the sale.

3. As the district court repeatedly stated, plaintiffs challenged the Forest Service's "management activities" "in practice" "with respect to implementing [the] LRMP in accordance with the NFMA." *Sierra Club v. Glickman*, 974 F.Supp. at 911, 912, 914. The court found that this "failure to *implement* timber sales in compliance with the NFMA and regulations, as alleged by Plaintiffs, is a final agency action for purpose of section 704." *Id.* at 914 (emphasis added). (App. C at 111a.) In doing so, the court rejected the "contrary view, held by the Federal Defendants and Timber Intervenors" because otherwise "all of the Forest Service's on-the-ground violations of the NFMA and regulations [would

be] beyond judicial review," essentially granting the Forest Service "absolute immunity from its on-the-ground management activities." *Id.* at 914-15. (App. 111a.)

The court of appeals viewed these allegations as constituting a challenge which "sought 'wholesale improvement' *see Lujan*, 497 U.S. at 891, of the Forest Service's 'program' of timber management in the Texas forests[.]" *Sierra Club v. Peterson*, 228 F.3d at 566. It found no "identifiable action or event" which would "mark the 'consummation' of the agency's decision making process" in plaintiffs' claims of NFMA violations during the implementation of the timber sales. *Id.* (quoting *Lujan*, 497 U.S. at 899, and *Bennett v. Spear*, 520 U.S. at 154, 178 (1997)). According to the Fifth Circuit's opinion, only "discrete site-specific [timber] sales allowed by the Forest Service" may be challenged in court. *Id.* at 568. Plaintiffs did plead site-specific sales, but because Plaintiffs also pled and sought relief for violations that occurred "throughout the Texas forests," the Fifth Circuit held that no specific agency action was challenged, and that the district court lacked jurisdiction.

Second, the Fifth Circuit's opinion limits the evidence which can be introduced to show the violations of the NFMA in the implementation of the harvesting of timber in the National Forests of Texas. The court found that the Plaintiffs' challenge was an impermissible "programmatic challenge" in part because of "their evidence, which concerned practices throughout the Texas forests and dated back to implementation of the NFMA[.]" *Id.* at 567.

The effect of these two constraints is plain: A plaintiff cannot challenge the implementation of a sale, but must

challenge the sale itself.[5] The plaintiff cannot use evidence of the implementation of other sales because to do so would convert the site-specific challenge to a general "program wide" challenge. However, "[t]he environmental groups could not directly challenge many of the completed timber sales whose effects they complain of because these sales would now be moot." *Id.* at 566 n.11. Thus, a plaintiff seeking to correct violations of the NFMA in the *implementation* of timber sales is completely prevented from doing so by the Fifth Circuit's opinion: A prospective challenge to the implementation of a sale by relying on evidence of the implementation of other sales is prohibited as a "programmatic challenge" and the post-implementation challenge is prohibited as moot as the damage is already done.

Congress intended for citizens to be able to challenge the actions of government agencies when those actions are in violation of the law and harm the plaintiffs. The court of appeals would immunize the Forest Service's violations of the NFMA during the most important part of the process of harvesting timber in the National Forests of Texas: when the trees are actually being cut and the damage to the forest is actually occurring. The issue in such a challenge is not whether the plans are defective, but whether the forest is actually being harmed in violation of NFMA's substantive constraints. Of all potential times when judicial oversight should be permitted, it is when the actual harm is being inflicted. The Fifth Circuit's opinion results in the opposite outcome: the time when review is the least available is when the harm is most likely. This is the converse of the policy and rules enunciated by this Court in *Ohio Forestry*.

---

[5] Of course, as set forth at 4 and 8, *supra*, Plaintiffs did challenge a total of twenty-eight sales.

The evidence and trial court record fully addressed the ripe timber sales. As to NFMA's inventorying and monitoring requirements, it was uncontroverted that the Forest Service did no inventorying and monitoring anywhere in Texas National Forests, including the areas which had been the subject of final agency action, where ripe timber sales were pending. The Forest Service admitted that it would not do such monitoring in the future, because it was not "practical." *Sierra Club v. Glickman*, 974 F. Supp. at 944. With respect to the carrying out of timber harvests, the district court accepted the Defendants' representations that the pending timber sales would be carried out in the "typical" fashion. Although the evidence, of necessity, mentioned matters outside the precise geographic boundaries of the twenty-eight compartments, there was ample evidence that the twenty-eight sales violated NFMA and its regulations.

4. The Fifth Circuit reverses because "The scope of the environmental groups' claims and the relief they obtained go well beyond any challenge to discrete sales." *Sierra Club v. Peterson*, 228 F.3d at 566. (App. 18a.) The holding thus is that a plaintiff may not plead for more relief than that to which an appellate court ultimately finds him entitled; and that if a plaintiff's pleading or evidence exceeds that scope, then all relief should be vacated. This is not only logically flawed, but again yields the result of effectively precluding substantive NFMA challenges. Petitioner therefore submits that, at a minimum, the trial court's injunction should have been upheld as to the twenty-eight sales.

CONCLUSION

Petitioners appropriately challenged the Forest Service's actions with respect to the harvesting of timber in the Texas National Forest. They identified final agency actions which conferred jurisdiction on the trial court. The trial court found extensive and ongoing violations of the NFMA at the time that the trees were actually being cut, despite the law, the regulations, and the requirements of the Forest Service's own planning documents. The court of appeals decision is contrary to statute and to this Court's opinion in *Ohio Forestry*. It is therefore respectfully submitted that the petition for a writ of certiorari should be granted.

Respectfully submitted,

/s/_____
Mary A. Van Kerrebrook
Counsel of Record
Wilson, Cribbs, Goren & Flaum, P.C.
440 Louisiana, Suite 2200
Houston, Texas 77002
(713) 547-8506

Thomas B. Cowart
Law Offfices of Windle Turley, P.C.
6440 N. Central Expressway,
Suite 1000
Dallas, Texas 75206
(214) 691-4025

Counsel for Petitioners

APPENDIX A

UNITED STATES COURT OF APPEALS FOR THE FIFTH CIRCUIT

[Filed September 20, 2000]

No. 97-41274

SIERRA CLUB; WILDERNESS SOCIETY; TEXAS COMMITTEE ON NATURAL RESOURCES,
Plaintiffs - Appellees,

v.

R. MAX PETERSON; et al.,
Defendants,

DANIEL GLICKMAN, In his official capacity as the Secretary of the Department of Agriculture; ELIZABETH ESTILL, In her official capacity as the Regional Forester, U.S. Forest Service, Region 8; MICHAEL DOMBECK, In his official capacity as Chief, U.S. Forest Service; RONALD RAUM, In his official capacity as the Forest Supervisor, National Forests and Grasslands in Texas,
Defendants - Appellants,

TEXAS FORESTRY ASSOCIATION; SOUTHERN TIMBER PURCHASERS

COUNCIL,)
Intervenor - Defendants - Appellants)
)

Appeal from the United States District Court
for the Eastern District of Texas

Filed: September 20, 2000
Rehearing Denied: November 21, 2000

Before POLITZ, JOLLY, HIGGINBOTHAM, DAVIS, JONES, SMITH, WIENER, BARKSDALE, EMILIO M. GARZA, DeMOSS, BENAVIDES, STEWART, and DENNIS, Circuit Judges.*

EMILIO M. GARZA, Circuit Judge:

The single issue before us is whether the plaintiffs in this case--the Sierra Club, the Texas Committee on Natural Resources ("TCONR"), and the Wilderness Society (collectively, the "environmental groups")--limited their challenge to identifiable final agency actions of the United States Forest Service. *See* 5 U.S.C. § 704. Because we conclude that they did not, and that the district court therefore exceeded its jurisdiction in hearing their challenge, we vacate and remand.

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* Judges Jolly, Higginbotham, Davis, Jones, Smith, Barksdale, and DeMoss concur in the majority opinion. Judge Higginbotham files a separate concurrence. Judges Politz, Wiener, Benavides, and Dennis concur in Judge Stewart's dissent. Chief Judge King did not participate in this decision. Judge Parker is recused and did not participate.

I
A

The Forest Service's regulation of the National Forest system is governed by the National Forest Management Act of 1976 ("NFMA").[1] *See* 16 U.S.C. § 1600, *et seq.*[2] Among other things, the NFMA requires the Forest Service to prepare a land and resource management plan ("LRMP") for each unit of the National Forest System. *See* 16 U.S.C. § 1604(a). LRMPs govern use of the individual forests, and they must fulfill the Forest Service's mandate to "provide for multiple use and sustained yield . . . includ[ing] coordination of outdoor recreation, range, timber, watershed, wildlife and fish, and wilderness." *Id.* at § 1604(e)(1);[3] *see also Ohio Forestry Ass'n, Inc. v. Sierra Club,* 523 U.S. 726, 729, 118 S. Ct. 1665, 140 L. Ed. 2d 921 (1998) (citing 16 U.S.C. § 1604(g) and 36 C.F.R. § 219.1 (a) and stating that LRMPs must further both commercial and environmental goals); *Sierra Club v. Robertson,* 28 F.3d 753,755 (8th Cir. 1994)

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[1] The NFMA directed the Forest Service to adopt implementing regulations. *See* 16 U.S.C. § 1604 (g). These regulations, *see* 36 C.F.R. § 219.1, *et seq.*, and the NFMA, both of which were at issue in the trial below, are collectively referred to herein as "NFMA."

[2] The Department of Agriculture is statutorily charged with administration of the National Forest System. *See* 16 U.S.C. § 1604(a). The Department has in turn delegated this responsibility to the Forest Service. *See* 36 C.F.R. § 200.3(b)(2).

[3] The NFMA operates in conjunction with the National Environmental Policy Act ("NEPA"), *see 16* U.S.C. § 1604(g)(1) (making the NEPA applicable to the NFMA), requiring the Forest Service to prepare an environmental impact statement ("EIS") whenever it issues an LRMP, *see* 36 C.F.R. 219.10(b).

("[A]n LRMP is, in essence, a programmatic statement of intent that establishes basic guidelines and sets forth the planning elements that will be employed by the Forest Service in future site-specific decisions.").

Preparation of an LRMP is the first step in timber harvesting. The second step occurs when the Forest Service authorizes harvesting in a specific location by selecting a timber sale area, preparing an environmental assessment ("EA"), allowing public comment, and awarding a timber harvesting contract to the highest bidder. *See* 36 C.F.R. 223.1, *et seq.* The Forest Service can do this "only after analyzing timber management alternatives and the sale's particular environmental consequences," *Sierra Club v. Espy,* 38 F.3d 792, 795 (5th Cir. 1994), and after determining that the decision to sell in a given area is consistent with the LRMP, 16 U.S.C. § 1604(i); 36 C.F.R. §§ 219.10(e), 223.30.

B

The focus of this case has changed several times since the environmental groups initiated it in 1985. The single constant has been their disagreement with the Forest Service's administration of the Texas National Forests.[4]

The current incarnation of this litigation involves the environmental groups' objections to "even-aged timber

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[4] These forests--the Sam Houston, the Davy Crockett, the Angelina, and the Sabine--cover 639,000 acres in Texas. Each forest is divided into "compartments," which are in turn divided into "stands."

management" in the Texas forests. Even-aged management encompasses timber harvesting techniques which involve cutting all or almost all of the trees in the same stand at the same time.[5] This results "in the creation of stands in which trees of essentially the same age grow together." 36 C.F.R. § 219.3. The NFMA allows even-aged management if the Forest Service determines that such techniques are "appropriate" (or, in the case of clearcutting, that it is the "optimum method") for complying with the non-commercial goals of the LRMP. *See* 16 U.S.C. § 1604(g)(3)(F)(i); *see also Espy,* 38 F.3d at 800 (noting that "[t]he regulations implementing NFMA provide a minimum level of protection" of non-timber-harvesting interests).

In 1987, the Forest Service developed an LRMP and an accompanying EIS for the Texas forests which used even-aged management as the primary means of timber harvesting. After the environmental groups administratively challenged this LRMP, the Chief of the Forest Service remanded it for revision in 1989. In the interim, the Chief adopted a temporary scheme for managing the Texas forests, allowing the Forest Service to make decisions regarding the choice of

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[5] Even-aged management methods include clearcutting (where all the trees in a stand are cut at once), seed tree cutting (where a few trees per stand are temporarily left uncut to reseed the stand), and shelterwood cutting, (where twice as many trees are left in a stand as under the seed tree cutting method). *See Sierra Club v. Espy,* 38 F.3d 792, 795 (5th Cir. 1994) ("Even under the least intrusive even-aged management technique, shelterwood cutting, only about sixteen trees per acre remain after a cut."). Even-aged management contrasts with uneven-aged management (also called selection management), which involves selective cutting and which therefore results in differently-aged trees in the same stand. *See id.* at 796.

timber management techniques at the site-specific level, and allowing even-aged management at specific sites if such management generally complied with the 1987 Plan.

This portion of the litigation has involved the environmental groups' attempts since then to halt the use of even-aged management in the Texas forests. The broad scope of their challenge has remained constant: while they have identified specific Forest Service acts which they allege violate the NFMA, they have consistently challenged the Forest Service's entire program of allowing timber harvesting in the Texas forests.

The environmental groups filed their Fourth Amended Complaint in 1992. This complaint raised "four major claims," 4th Am. Compl. at 1, including the even-aged management claim at issue here. The environmental groups cited twelve allegedly ripe and allegedly improper timber sales in support of this claim, but they made clear that these sales were examples of the larger even-aged management techniques they were challenging rather than the extent of their challenge.[6] Accordingly, the complaint requested broad

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[6] The complaint continually discusses general Forest Service practices. *See id.* at 19 ("The LRMP provides, among other items, for even-age management of 100% of the 'suitable lands', which is new Forest Service terminology for available commercial timber, in the four national forests in Texas, 60% to be harvested by clearcutting, and 40% by seed-tree and shelterwood methods, at end of rotation. The Defendants are engaged in selling national forest sawlogs to private loggers under a ratio almost that high, and in many other practices of even-age management, including site preparation of virtually all stands after such harvesting.") (numbering omitted); *id.* at 20 ("[T]he Supervisor has issued, executed, and implemented numerous site-specific decisions,

injunctive relief blocking further timber sales or even-aged management in the "national forests in Texas." *Id.* at 34-35.

In 1993, the district court granted a preliminary injunction against "further even-aged logging." *Sierra Club v. Espy,* 822 F. Supp. 356, 370 (E.D. Tex. 1993). We reversed. *See Espy,* 38 F.3d at 803. As an initial matter, recognizing the overbreadth of the injunction, we limited it to the "nine pending timber sales" which the court properly had before it. *See id.* at 798 ("The district court's order appears to enjoin the Forest Service's entire even-aged management agenda; however it is clear that the court had before it only the nine pending timber sales. TCONR concedes that the injunction, properly read, applies only to the nine sales"). We

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environmental assessments (EA's), sale prospecti, solicitations for quotation, and other processes. . . . They total tens of thousands of acres, devastating vast segments of the forests."); *id.* ("The LRMP, the ongoing course of conduct, the site-specific EA's and decisions, and the scheduled sales and contracts aforesaid are in violation of the following sections of NFMA in each of the following ways. . . ."). It then addresses "New Sales" by stating that "Defendants continue to render and to implement decisions to conduct predominant even-age logging practices." *Id.* at 23-24; *see also id.* at 23 ("Defendants have unduly prolonged their unlawful practice of predominant clearcutting, seed-tree cutting, shelterwood cutting, denudation by site preparation, and monoculture planting far beyond the first estimate for a final decision on TCONR's objection."). It references "Exhibit A [which] is a list of some of these sales," *id.* at 24, but it makes clear that the even-aged management claim extends beyond these sales: "Altogether, these sales, plus other even-age practices such as site preparation, single-species planting, hardwood suppression, and salvage logging, amount to an average of at least 2.3% of the available commercial timberland in the four national forests. . . . At this rate, Defendants will eliminate all native biodiversity from these timberlands in less than 16 years, unless this Court restrains such operations," *id.* at 24-25.

then vacated and remanded, holding that the injunction was based on the district court's mistaken view that, under the NFMA, even-aged management techniques "could only be used in exceptional circumstances." *Id.* at 798-803.

On remand, the environmental groups asked the district court for a trial on their even-aged management claim. Their trial request focused on their argument that the Forest Service's "on-the-ground" use of even-aged management violated the NFMA. The request was as broad in scope as the Fourth Amended Complaint. *See* Trial Req. at 3 ("Since virtually every even-age logging operation in the national forests in Texas involved failure to protect . . . resources . . . , such operations run into the thousands, generally with similar harmful results."). It identified "instances [ranging from the 1970s to 1995] of places and times where Defendants have failed and are failing to carry out protection of diversity and the congressionally designated resources," *id.* at 3-4; *see also id.* at Appendix I at 5, 14 (same), and it asked the court to conduct a trial "before Defendants advertise any even-age sales," *id.* at 18.[7]

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[7] The breadth of the environmental groups' challenge was apparent throughout their trial request. For example, they stated that the Forest Service failed to protect wildlife, recreation, aesthetics, and diversity "[i]n virtually all even-age operations." *Id.* at 7. They noted that "[s]everal of Defendants' damaging *practices, forest-wide,* were not necessary even for even-age logging." *Id.* at 10 (emphasis added). They stated that "Defendants have failed to make any selection management timber sales for 19 years after enactment of NFMA." *Id.* at 11. They then asked for a remedy "[b]anning even-age logging until the defendants comply with NFMA." *Id.* at 18. Finally, they identified "Specific Examples of Failure to Carry Out Protection" which extended from the 1970s to 1995. *Id.*, Appendix I at 2, Appendix II at 1; *see also id.*, Appendix I at 1 ("In these appendices, Plaintiffs provide instances

The environmental groups next filed a "Supplemental Complaint," which re-enumerated their charges that the Forest Service was violating the NFMA. Although the Supplemental Complaint identified "18 [scheduled] even-age cutting decisions," it again generally challenged the Forest Service's allowance of even-aged management, noting that several of the violations had been ongoing "[e]ver since the [1976] enactment of NFMA." Supplemental Compl. at 1, 4, 6. It again contained a request for a broad injunction against even-aged management practices.

The district court granted the environmental groups' trial request and held a seven-day bench trial on three issues:

> (1) Whether the Forest Service has, in practice, as required by the regulations, kept current and adequate inventories and monitoring data for key resources in the national forests in Texas; (2) Whether the Forest Service has, in practice, as required by the regulations, protected key resources in its application of even-aged management techniques; and (3) Whether the Forest Service has, in practice, as required by the regulations, provided for diversity of plant and animal communities in its application of even-aged management techniques.

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of Defendants' failure to protect congressionally protected resources to indicate what is happening throughout the four national forests in Texas.")

Sierra Club, 974 F. Supp. at 912. To establish its jurisdiction, the court concluded that the environmental groups had challenged a "final agency action," a prerequisite to suit against an administrative agency under the Administrative Procedure Act ("APA"). The court identified the final agency action as the Forest Service's general allowance of even-aged management in the Texas forests rather than any specific timber sales the Forest Service decided to allow in the forests:

> The Forest Service's failure to implement timber sales in compliance with the NFMA and regulations, as alleged by Plaintiffs, is a final agency action for purposes of section 704. Once the Forest Service adopted a final, definite course of action or inaction with respect to the management of the forest lands (regardless of whether that action or inaction is memorialized in a written agency decision), the court has a "final agency action" to review.

Id. at 914 (discussing 5 U.S.C. § 704).

On the merits, the court concluded that the Forest Service had violated its duties under the NFMA to protect resources and to monitor and inventory.[8] Accordingly, the

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[8] Specifically, the court determined that the Forest Service was violating its duties to protect: soil resources, *see* 16 U.S.C. § 1604(g)(3)(E)(i), (g)(3)(F)(v); 36 C.F.R. § 219.27(a)(1), (b)(5), (c)(6), (f); and watershed resources, *see* 16 U.S.C. § 1604(g)(3)(E)(i), (g)(3)(E)(iii), (g)(3)(F)(v); 36 C.F.R. § 219.27(a)(1), (a)(4), (b)(5), (c)(6), (e), (f). *See Sierra Club*, 974 F. Supp. at 942. Additionally, the court found that the Forest

court entered a permanent injunction barring the Forest Service from allowing almost any timber harvesting[9] "until such time that the Forest Service (1) complies with the NFMA and regulations with respect to the implementation of past timber sales and (2) assures the court that any future timber harvesting will be in compliance on-the-ground." *Id.* at 945.

Service was not inventorying and monitoring the following properly: wildlife, *see* 16 U.S.C. § 1604(g)(2)(B), (g)(3)(C); 36 C.F.R. §§ 219.11(d), 219.12(d), (k), 219.19(a) (1), (a)(2), (a)(5), (a)(6); diversity, *see* 36 C.F.R. § 219.26; and its success in meeting its objectives and adhering to its standards, *see* 36 C.F.R. § 219.12(k). *See Sierra Club*, 974 F. Supp. at 942.

[9] The court continued to allow harvesting "for insect or disease control, fire protection, or any other reason necessary to maintain the health of the forest land." *Id.* at 945.

The Forest Service appealed,[10] challenging several aspects of the court's ruling. A panel of this court affirmed. *See Sierra Club v. Glickman,* 185 F.3d 349, 375 (5th Cir. 1999). Significantly, the panel found that the environmental groups had challenged two distinct final agency actions: "the decision to engage in timber sales resulting from even-aged management and the failure to inventory and to monitor [certain species]." *Id.* at 364. We granted *en banc* review, *see Sierra Club v. Glickman,* 204 F.3d 580 (5th Cir. 2000), thereby vacating the panel opinion, and we directed the parties to address whether the environmental groups had actually challenged a specific final agency action.

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[10] The Texas Forestry Association and the Southern Timber Purchasers Council, to whom we had previously granted leave to intervene, *see Sierra Club v. Espy,* 18 F.3d 1202, 1208 (5th Cir. 1994), separately appealed.

On appeal, the environmental groups continue to make clear that they are broadly challenging Forest Service practice in the Texas forests rather than limiting their challenge to discrete sales. *See, e.g.,* Br. of TCONR and Sierra Club at 5 ("The facts, testimony and photographs demonstrated overwhelming violations of laws and regulations in Compartment 98 and throughout the Texas National Forests."); *id.* at 12 ("This lawsuit is not an appeal of an adjudicatory decision by the Forest Service. It is a challenge to the *carrying out and results* of(not *a plan for)* clearcutting and its variant harvesting practices in Texas National Forests.") (emphases in original); *id.* at 26 ("The Forest Service's carrying out of its even-age logging program, and the physical results thereof, are substantive actions specifically covered by NFMA."); *id.* at 33 ("The violations of law are ongoing, occur throughout the Texas National Forests, and could not be remedied absent the relief granted by the district court."); Br. of Wilderness Society at 29 ("Where there is systemwide impact, there may be systemwide relief.").

II

The NFMA does not provide for judicial review of Forest Service decisions, and therefore the general review provisions of the APA apply by default. *See American Airlines, Inc. v. Herman,* 176 F.3d 283, 287 (5th Cir. 1999). These provisions limit our review to a "final agency action." *See* 5 U.S.C. § 704 ("Agency action made reviewable by statute and final agency action for which there is no other adequate remedy in a court are subject to judicial review."); *Lujan v. National Wildlife Fed'n,* 497 U.S. 871,882, 110 S. Ct. 3177, 111 L. Ed. 2d 695 (1990) ("When, as here, review is sought not pursuant to specific authorization in the substantive statute, but only under the general review provisions of the APA, the 'agency action' in question must be 'final agency action.'"). Final agency actions are actions which (1) "mark the consummation of the agency's decisionmaking process," and (2) "by which rights or obligations have been determined, or from which legal consequences will flow." *Bennett v. Spear,* 520 U.S. 154, 178, 117 S. Ct. 1154, 137 L. Ed. 2d 281 (1997) (quotations omitted). The final action must be "an identifiable action or event." *Lujan,* 497 U.S. at 899, 110 S. Ct. 3177. Absent a specific and final agency action, we lack jurisdiction to consider a challenge to agency conduct. *See American Airlines,* 176 F.3d at 287.

In *Lujan,* the plaintiff challenged the Secretary of the Interior's entire "land withdrawal review program." *See Lujan,* 497 U.S. at 877-79, 110 S. Ct. 3177. The program covered the Bureau of Land Management's (BLM's") activities in complying with the Federal Land Policy and Management Act of 1976 ("FLPMA"). *See id.* at 877, 110 S.

Ct. 3177. The Court found that the plaintiffs claim failed because the plaintiff had not challenged a particular final agency action. Instead of limiting its challenge to a "single BLM order or regulation, or even to a completed universe of particular BLM orders and regulations," the plaintiff challenged "the continuing (and thus constantly changing) operations of the BLM in reviewing withdrawal revocation applications and the classifications of public lands and developing land use plans as required by the FLPMA." *Id.* at 890, 110 S. Ct. 3177.

Lujan thus announced a prohibition on programmatic challenges: "respondent cannot seek wholesale improvement of this program by court decree, rather than in the offices of the Department or the halls of Congress, where programmatic improvements are normally made." *Id.* at 891, 110 S. Ct. 3177. The decision makes clear that this prohibition is motivated by institutional limits on courts which constrain our review to narrow and concrete actual controversies. *See id.* at 891-94, 110 S. Ct. 3177. We thereby not only avoid encroaching on the other branches of government, but we continue to respect the expert judgment of agencies specifically created to deal with complex and technical issues. *Cf., e.g., Cronin v. United States Dep't of Agric.*, 919 F.2d 439, 444 (7th Cir. 1990) ("Administrative agencies deal with technical questions, and it is imprudent for the generalist judges of the federal district courts and courts of appeals to consider testimonial and documentary evidence bearing on those questions unless the evidence has first been presented to and considered by the agency. Trees may seem far removed from the arcana of administrative determination, but one has only to glance at the documents submitted in this case to realize that 'silviculture' is in fact a technical field, and not

just one with a dry and forbidding vocabulary."); *Espy,* 38 F.3d at 799 ("NFMA was an effort to place the initial technical, management responsibility for the application of NFMA guidelines on the responsible government agency, in this case the Forest Service.") (quotations omitted).

The environmental groups' challenge is precisely the type of programmatic challenge that the Supreme Court struck down in *Lujan.* The environmental groups challenged past, ongoing, and future timber sales approved by the Forest Service, and they argued that the Forest Service failed to monitor and inventory properly in conducting these sales. This challenge sought "wholesale improvement," *see Lujan,* 497 U.S. at 891, 110 S. Ct. 3177, of the Forest Service's "program" of timber management in the Texas forests, objecting to Forest Service practices throughout the four National Forests in Texas and covering harvesting from the 1970s to timber sales which have not yet occurred. This is not a justiciable challenge because the program of timber management to which the environmental groups object does not "mark the 'consummation' of the agency's decisionmaking process," *Bennett,* 520 U.S. at 178, 117 S. Ct. 1154, or constitute "an identifiable action or event," *Lujan,* 497 U.S. at 899, 110 S. Ct. 3177 ("[T]he 'land withdrawal review program' is not an identifiable action or event."). Instead, as in *Lujan,* the environmental groups have impermissibly attempted to "demand a general judicial review of the [Forest Service's] day-to-day operations." *Id.* The district court's accession to this demand, by reviewing and then enjoining almost all of the Forest Service's program of timber management in Texas forests until the Forest Service complies

with the NFMA, exceeded the court's jurisdiction under the APA.[11]

Nor is this programmatic challenge made justiciable by the fact that the environmental groups identified some specific sales in their pleadings that they argue are final agency actions. The environmental groups can challenge "a specific 'final agency action' [which] has an actual or immediately threatened effect," even when such a challenge has "the effect

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[11] Some of the individual acts the environmental groups challenge present their own justiciability problems which the environmental groups seek to avoid by consolidating them into its programmatic challenge. The environmental groups could not directly challenge many of the completed timber sales whose effects they complain of because these sales would now be moot. *See Florida Wildlife Fed'n v. Goldschmidt,* 611 F.2d 547, 549 (5th Cir. 1980) ("Where the activities sought to be enjoined have already substantially occurred and the appellate court can not undo what has already been done, the action is moot."). Insofar as the environmental groups challenge a failure to inventory or monitor that has not yet resulted in any legal consequences, these challenges are not ripe. *Cf. Ohio Forestry Ass'n,* 523 U.S. at 733-34, 118 S. Ct. 1665 (finding that a challenge to an LRMP was not ripe because the Plan's provisions "do not command anyone to do anything or to refrain from doing anything; they do not grant, withhold, or modify any formal legal license, power or authority; they do not subject anyone to any civil or criminal liability; they create no legal fights or obligations. . . . [B]efore the Forest Service can permit logging, it must focus upon a particular site, propose a specific harvesting method, prepare an environmental review, permit the public an opportunity to be heard, and (if challenged) justify the proposal in court."); *Ecology Center, Inc. v. United States Forest Serv.,* 192 F.3d 922, 925 (9th Cir. 1999) ("[A]lthough the Forest Service's monitoring duty is mandatory under the Plan, legal consequences do not necessarily flow from that duty, nor do rights or obligations arise from it.").

of requiring a regulation, a series of regulations, or even a whole 'program' to be revised by the agency." *Lujan,* 497 U.S. at 894, 110 S. Ct. 3177. However, this ability does not allow the environmental groups to challenge an entire program by simply identifying specific allegedly-improper final agency actions within that program, which is precisely what they did here. Rather than limit their challenge to individual sales, they merely used these sales as evidence to support their sweeping argument that the Forest Service's "on-the-ground" management of the Texas forests over the last twenty years violates the NFMA. This is clear from their allegations, which addressed the entire Texas forests, from their evidence, which concerned practices throughout the Texas forests and which dated back to implementation of the NFMA, and from their requested relief.

Similarly, the district court noted three broad trial issues before it, going to the Forest Service's entire management of the Texas forests. *See Sierra Club,* 974 F. Supp. at 912 (stating one issue as "[w]hether the Forest Service has, in practice, as required by the regulations, kept current and adequate inventories and monitoring data for key resources *in the national forests in Texas")* (emphasis added). The court did not limit its review to any specific sales but repeatedly reviewed NFMA compliance "on-the-ground"--i.e., throughout the Texas forests. *See, e.g., id.* at 918 (justifying its decision to focus primarily on sales in one compartment by stating that "the activities occurring on Compartment 98 of the Sam Houston National Forest are generally typical of even-aged regeneration activities across the National Forests in Texas."); *id.* at 927 (finding that "[o]n-the-ground, however, the Forest Service permits logging for timber production purposes right up to the stream

banks throughout the National Forests in Texas."). It then granted correspondingly broad relief barfing almost all timber harvesting in the Texas forests. *See Sierra Club,* 974 F. Supp. at 945.

The scope of the environmental groups' claims and the relief they obtained go well beyond any challenge to discrete sales. Both make clear that the environmental groups improperly obtained "a general judicial review of the [Forest Service's] day-to-day operations." *Lujan,* 497 U.S. at 899, 110 S. Ct. 3177. *Lujan* is controlling on this point: "it is at least entirely certain that the flaws in the entire 'program'--consisting principally of the many individual actions referenced in the complaint, and presumably actions yet to be taken as well--cannot be laid before the courts for wholesale correction under the APA, simply because one of them that is ripe for review adversely affects one of respondent's members." *Id.* at 892-93, 110 S. Ct. 3177; *see also id.* at 879, 110 S. Ct. 3177 (finding no final agency action, even though "[a]ppended to the amended complaint was a schedule of specific land-status determinations, which the complaint stated had been 'taken by defendants since January 1, 1981'").[12]

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[12] Disagreeing with our reading of *Lujan,* the dissent would hold that the environmental groups' references to specific timber sales makes their challenge to the entire administration of the Texas forests justiciable. As discussed above and in Part I.B, we think it clear that the environmental groups were challenging the Forest Service's entire program of administering Texas forests. Additionally, as the above-cited language from *Lujan* makes clear, a plaintiff cannot challenge an entire program simply by referencing specific actions undertaken as part of that program. Instead, the necessary institutional limitations on courts which *Lujan* identified limit our review of agency action to only specific and final agency

The environmental groups also cannot maintain their challenge under the alternative theory that the Forest Service "failed to act." In certain circumstances, agency inaction may be sufficiently final to make judicial review appropriate. *See* 5 U.S.C. § 706(1) (allowing courts "to compel agency action unlawfully withheld or unreasonably delayed"); *Sierra Club v. Thomas*, 828 F.2d 783,792-96 (D.C. Cir. 1987) (discussing different forms of agency inaction). The Forest Service's alleged failure to comply with the NFMA in maintaining Texas's national forests, however, does not reflect agency inaction. The Forest Service has not failed to issue an LRMP or to conduct timber sales. Nor have the environmental groups argued that the Forest Service did not attempt to comply with the NFMA. Instead, the Forest Service has been acting, but the environmental groups simply do not believe its actions have complied with the NFMA. *Cf. Ecology Center, Inc. v. United States Forest Serv.*, 192 F.3d 922, 926 (9th Cir. 1999) ("This court has refused to allow plaintiffs to evade the finality requirement with complaints about the sufficiency of an agency action 'dressed up as an agency's failure to act.'"); *Public Citizen v. Nuclear Regulatory Corem'n*, 845 F.2d 1105, 1108 (D.C. Cir. 1988) ("The agency has acted. . . . Petitioners just do not like what the Commission did. . . . Our acceptance of petitioners' argument would make a nullity of statutory deadlines. Almost any objection to an agency action can be dressed up as an agency's failure to act.").

Underlying the district court's opinion was a concern that finding no final agency action here "would put all of the Forest Service's on-the-ground violations of the NFMA and regulations beyond review." *Sierra Club*, 974 F. Supp. at

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actions.

915. This concern is misplaced insofar as the environmental groups still may challenge discrete site-specific sales allowed by the Forest Service. *See Ohio Forestry Ass'n,* 523 U.S. at 734, 118 S. Ct. 1665 ([B]efore the Forest Service can permit logging, it must focus upon a particular site, propose a specific harvesting method, prepare an environmental review, permit the public an opportunity to be heard, and (if challenged) justify the proposal in court."); *id.* at 734-35, 118 S. Ct. 1665 ("The Sierra Club . . . . does not explain, however, why one initial site-specific victory (if based on the Plan's unlawfulness) could not, through preclusion principles, effectively carry the day."); *Lujan,* 497 U.S. at 894, 110 S. Ct. 3177 (noting that a challenge to a specific final agency action "may ultimately have the effect of requiring a regulation, a series of regulations, or even a whole 'program' to be revised by the agency in order to avoid the unlawful result that the court discerns"). Judicial review can then take place with the "benefit of the focus that a particular logging proposal could provide." *Ohio Forestry Ass'n,* 523 U.S. at 736, 118 S. Ct. 1665.

This is precisely what the plaintiffs did in *Sierra Club v. Martin,* 168 F.3d 1 (11th Cir. 1999). The plaintiffs challenged seven timber sales in a Georgia national forest, arguing that the Forest Service's decision to permit the sales violated the NFMA.[13] *See id.* at 2. The Eleventh Circuit

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[13] The *Martin* plaintiffs limited their challenge to these sales, sought relief only as to these sales, and did not attempt to challenge the Forest Service's general administration of national forests. Accordingly, the court did not even need to address the final agency action issue we discuss here.

In contrast to *Martin,* but closer to the case here, is *Ecology Center.* In *Ecology Center,* the plaintiff challenged the Forest

considered the merits of their discrete challenge because it presented a concrete, justiciable controversy. *See id.* at 3-8 (finding that the Forest Service violated the NFMA and accompanying regulations in allowing the timber sales); *cf. Inland Empire Public Lands Council v. United States Forest Serv.*, 88 F.3d 754, 759-65 (9th Cir. 1996) (reviewing the merits of a NFMA and NEPA challenge to eight proposed timber sales on the merits); *Sierra Club v. United States Forest Serv.*, 46 F.3d 835, 839-40 (8th Cir. 1995) (reviewing the merits of a NEPA challenge to two timber sales).

Similarly, the Wilderness Society appears to argue that our ruling will prevent it from challenging the manner in which specific timber sales are implemented. This issue is not before us because the environmental groups did not attack the implementation of specific timber sales but rather attacked general Forest Service practice in the Texas forests. Thus, we need not address whether the implementation of a timber sale, as opposed to the announcement of the timber sale, is a final agency action which can be challenged in court. Nor need we address limits plaintiffs face on when they can introduce evidence of past timber sales and their implementation to show that specific timber sales before the court are improper.

Service's failure to monitor resources under an LRMP, arguing that this violated the NFMA and its implementing regulations. The Ninth Circuit affirmed the lower court's dismissal for lack of subject matter jurisdiction because the plaintiff had not challenged a final agency action. *See Ecology Center*, 192 F.3d at 926. Although the challenge in *Ecology Center* was narrower than the sweeping challenge here, both challenges ask the court to review some agency conduct which does not mark the culmination of a decision-making process.

Instead, we determine that where, as here, the challenge extends to general forestry practices, we lack jurisdiction to consider it.

Requiring plaintiffs to challenge individual timber sales may place a higher burden on environmental groups wishing to monitor Forest Service management practices. However, this does not allow us to disregard the jurisdictional requirement of a final agency action. *See Lujan,* 497 U.S. at 894, 110 S. Ct. 3177 (rejecting the plaintiffs programmatic challenge even though "[t]he case-by-case approach . . . is understandably frustrating to an organization such as respondent"); *cf. Ohio Forestry Ass'n,* 523 U.S. at 735, 118 S. Ct. 1665 ("[T]he Court has not considered this kind of litigation cost-saving sufficient by itself to justify review in a case that would otherwise be unripe."). As the Court noted in *Lujan,* judicial review of specific final agency actions "is the traditional, and remains the normal, mode of operation of the courts." *Lujan,* 497 U.S. at 894, 110 S. Ct. 3177. Courts are not equipped, nor are they the proper body, to resolve the technical issues involved in agency decision-making at "a higher level of generality." *Id.* Instead, until confided to us, these kinds of "sweeping" review are reserved to the other branches "where programmatic improvements are normally made." *Id.* at 891, 110 S. Ct. 3177.

III

Under the APA, the district court only had jurisdiction over challenges to identifiable final agency actions. *See* 5 U.S.C. § 704. Here, the district court acted outside its jurisdiction in reaching the merits of the environmental groups' programmatic challenge, thereby ignoring the critical

limits on judicial review which define the role of courts in the modem administrative state. Because this was improper, we VACATE the court's judgment and REMAND for proceedings not inconsistent with this opinion.[14]

PATRICK E. HIGGINBOTHAM, Circuit Judge, concurring.

The district court held that "[o]nce the Forest Service adopted a final, definite course of action or inaction with respect to the management of the forest lands (regardless of whether that action or inaction is memorialized in a written agency decision), the court has a 'final agency action' to review."[1] It is this jurisdictional holding that we reverse today. A challenge to a "course of action or inaction with respect to the management of the forest lands" is the epitome of a "programmatic" challenge over which federal courts have no jurisdiction.[2]

We do not rule today on any issue besides jurisdiction. But the mere holding that the plaintiffs must challenge a final agency action does not describe what a proper complaint or trial would look like. While we do not reach the issue of

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[14] These proceedings may include a trial limited to any existing specific final agency actions the environmental groups wish to challenge, such as announced timber sales, which have "an actual or immediately threatened effect." *See Lujan*, 497 U.S. at 894, 110 S. Ct. 3177.

[1] *Sierra Club v. Glickman*, 974 F. Supp. 905, 914 (E.D. Tex. 1997).

[2] *See Lujan v. National Wildlife Federation*, 497 U.S. 871, 891, 110 S.Ct. 3177, 111 L.Ed.2d 695 (1990).

whether any of the evidence presented or relief granted was proper or not,[3] I comment briefly on these issues to provide guidance to the trial court on remand.

Regarding allegations and proof, the plaintiffs must allege and prove that a specific timber sale[4] will violate the law. This is not a formalism. Once the plaintiff identifies a sale, it can then direct the court's attention to those steps leading up to and including the sale's implementation that render the sale illegal. In the initial stages of this litigation, the plaintiffs did this. They challenged the Forest Service's LRMP and environmental impact statements--early steps in the process of forest management with forest-wide application. *Sierra Club v. Espy*[5] upheld their validity, agreeing with the Forest Service that even-age management does not violate the NFMA and NEPA.[6]

After *Sierra Club v. Espy*, the plaintiff's abandoned their sale-specific challenge to the Forest Service's activities; they instead challenged on-the-ground conduct throughout the Texas National Forests. In doing so, they strayed beyond the

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[3] *See* maj. op. at 568-69.

[4] The announcement of a timber sale is a final agency action. We do not today address whether implementation of a timber sale also constitutes final agency action. *See* maj. op. at 15.

[5] 38 F.3d 792 (5th Cir. 1994).

[6] Plaintiffs conceded, and the court held, that the scope of the preliminary injunction at issue was limited to nine identified timber sales. *Id.* at 798.

jurisdiction of the federal courts. The next logical step would have been to challenge the site-specific decision making by the Forest Service. This has at least two components: the procedure of creating a project implementation plan and drafting a contract of sale, and the actual implementation, on-the-ground, of the requirements contained in those documents.[7] These components require different evidence: the former depends on the conformity of the documents to the controlling regulations and forest plans; the latter requires a fact-intensive inquiry into whether actual implementation conforms to those documents. More importantly, which of these components is the source of any alleged illegality will affect the scope and content of any injunction the court enters.

As this case demonstrates, a generalized challenge glosses over these distinctions. It leaves the district court with a Hobson's choice: either entering an injunction that is too vague to distinguish between legal and illegal future sales, or devising some sort of prescriptive relief that may not address what is wrong with the challenged sales.[8]

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[7] At trial, the defendants presented testimony describing the development of the project implementation plan and timber sale contract preceding implementation. Plaintiffs, however, ignored these procedures. They neither argued that those documents violated the regulations or forest plans nor did they argue that the implementation of timber sales violated the project implementation plans or contracts.

[8] *Cf Sierra Club v. Glickman*, 794 F. Supp. at 945 (weighing prospective injunction and prescriptive, retrospective injunction).

On the other hand, requiring a challenge to final agency action does not straightjacket plaintiffs in presenting evidence on implementation. Since the implementation of a challenged timber sale necessarily has not occurred at the time of suit, evidence of improper implementation must come from past sales. Thus, there is nothing wrong per se with evidence of the Forest Service's implementation of timber sales from past years. Nor is there necessarily any error in defendants presenting evidence from a single compartment and testifying that it is typical of Forest Service practice. What is important is that the plaintiffs must prove, and the trial court must find by a preponderance of the evidence, that the Forest Service will violate the law in executing or implementing the specific, challenged timber sale. The court does not have jurisdiction to grant relief to plaintiffs based on the generalized past practices of the defendants; evidence not probative of future violations should not be admitted.

Finally, as to remedy, a court may not enjoin an entire program, such as the selling of timber in the Texas National Forests. But a component of enjoining a discrete, challenged action is enjoining the conduct that makes the challenged actions illegal. Thus, an injunction directed at specific sales may prevent the completion of unnamed, future timber sales that share the illegality of the challenged sales.[9]

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[9] *See Lujan v. National Wildlife Federation*, 497 U.S. at 894, 110 S.Ct. 3177 (citation omitted): [W]e intervene in the administration of the laws only when, and to the extent that, a specific "final agency action" has an actual or immediate threatened effect. Such an intervention may ultimately have the effect of requiring a regulation, a series of regulations, or even a whole "program" to be revised by the agency in order to avoid the unlawful result that the court discerns.

Unlike a programmatic challenge, a challenge to a specific timber sale would bring into focus the nature of the illegality the plaintiffs allege. The actions taken by the Forest Service during the execution of a timber cut are made pursuant to Service's site-specific "project implementation plan" and the provisions of the contract for the sale of that timber. Thus, a challenge to an announced timber sale would involve two prongs: either a challenge to the validity of any resulting project implementation plan or contract, or proof that the on-the-ground actions of the Forest Service will violate any valid project implementation plan or contract (which conforms to the regulations and LRMP).

In this case, the plaintiffs presented no evidence about project implementation plans or contracts. But a challenge to specific timber sales would require a ruling on the validity of any (existing or potential) project implementation plan or contract before the issue of on-the-ground implementation even arose. This places a greater burden on plaintiffs; but if they prove that those documents violate the regulations or the LRMP, or that the Forest Service cannot create a valid project implementation plan (for example, due to failure to keep or make necessary records), plaintiffs need not even reach the issue of on-the-ground implementation.

Also, a suit and trial on specific timber sales will focus the attention of the parties on the issue of improper implementation of the regulations and LRMP. Much of the evidence at trial in this case revisited the validity of the regulations, LRMP, and even the practice of even-age harvesting. The plaintiffs presented evidence that conformity with the regulations and LRMP violated the law. This, of course, challenges not the implementation of the regulations

and the LRMP, but their validity, which was settled by *Sierra Club v. Espy*. Given the validity of the regulations and the LRMP, the plaintiffs must prove that the on-the-ground actions of the Forest Service were inconsistent with the regulations and LRMP.

CARL E. STEWART, Circuit Judge, with whom POLITZ, WIENER, BENAVIDES, and DENNIS, Circuit Judges, join, dissenting:

The majority has held that the plaintiffs in this case did not limit their challenge to final agency actions of the United States Forest Service, and that therefore the district court exceeded its jurisdiction in hearing the plaintiffs claims. Based on the record in this case and applicable case law I cannot agree with the conclusion reached by the majority. For the following reasons I respectfully dissent.[1]

The majority opinion relies primarily on the Supreme Court's decision in *Lujan v. National Wildlife Federation*, 497 U.S. 871, 110 S.Ct. 3177, 111 L.Ed. 2d 695 (1990). From the beginning, I have disagreed with the majority's broad interpretation of the *Lujan* holding. The facts of the present case are significantly different from those in *Lujan*, and the holding of that case does not foreclose the type of challenge put forth by the plaintiffs in the present case.

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[1] Too many trees have already been spent, literally and figuratively, to warrant a lengthy dissent recounting all of the complicated factual and procedural history of this case. For a fuller explanation of the factual and procedural background, and the district court's findings on the merits of the plaintiffs' claims see the original panel opinion in this matter at 185 F.3d 349 (5th Cir. 1999).

The plaintiffs in *Lujan* challenged the "land withdrawal review program" of the Bureau of Land Management ("BLM"). *Lujan*, 497 U.S. at 890, 110 S.Ct. 3177. The Supreme Court emphasized that the "land withdrawal review program" challenged by the plaintiffs did not "refer to a single BLM order or regulation, or even to a completed universe of particular BLM orders and regulations. [the land withdrawal review program] is simply the name by which petitioners have occasionally referred to the continuing operations of the BLM. . . " *Id.* The plaintiffs in *Lujan* made an extremely broad and general challenge to agency actions. The *Lujan* plaintiffs failed to identify any single BLM order, regulation or coherent set of policies that they felt had been violated.

Clearly, the plaintiffs allegations in the present case are infinitely more developed and specific than the allegations made by the plaintiffs in *Lujan*. The majority concedes that in this litigation the plaintiffs "identified specific Forest Service acts which they allege violate the NFMA." The majority also acknowledges the specific allegations set forth by the plaintiffs in the Fourth Amended Complaint. The Fourth Amended Complaint demonstrates that the plaintiffs complained of specific decisions by the Forest Service to permit even-aged timber management and timber sales. The plaintiffs did not challenge the Forest Service management procedures as a whole, but instead identified the specific harms which they sought to have redressed. The Fourth Amended Complaint alleges that:

> From on or about August 22, 1991, through September 26, 1991, Defendants made decisions to sell timber by even-aged logging

> on at least 16 compartments in all four national forests in Texas. Defendants will make these sales in the near future, unless restrained. Parties appealed these 16 administratively. Defendants always denied the appeals, in a standard way. . . Attached as Exhibit A is a list of some of the sales.

(R. 5024). Exhibit A lists the specific compartments marked by the Forest Service for timber sales. The majority has also acknowledged the "Supplemental Complaint" submitted by the plaintiffs identified 18 scheduled even-age cutting decisions. Thus, unlike the plaintiffs in Lujan who failed to identify "a single [agency] order or regulation, or even . . . a completed universe of particular [agency] orders and regulations," the plaintiffs in this case have continuously identified specific agency actions which they allege violate the NFMA. Perhaps the most telling piece of evidence from the record is the fact that the district court was able to conduct a seven-day bench trial on the plaintiffs allegations regarding the even-aged management practices of the Forest Service in this case. The evidence submitted at trial focused on specific sales and specific pieces of land.

The majority does not dispute that in the Fourth Amended Complaint, and the "Supplemental Complaint" the plaintiffs cited specific timber sales and actions taken by the Forest Service which they alleged violate the NFMA. It appears that the majority's central argument is that the plaintiffs pleadings also contain general allegations regarding the Forest Service's even-aged management and clearcutting practices. The majority is suggesting that the use of these general allegations dilutes or negates the existence of the

plaintiffs specific allegations challenging specific timber sales and specific decisions made by the Forest Service.

Lujan does not prohibit plaintiffs from combining both general and specific allegations in their complaint, instead *Lujan* simply requires that a plaintiff must direct its attack against "some particular 'agency action' that causes it harm." *Id.* The Supreme Court stated that the purpose of requiring a plaintiff to challenge a specific agency action is to insure that "the scope of the controversy has been reduced to more manageable proportions, and its factual components fleshed out, by some concrete action applying the regulation to the claimant's situation in a fashion that harms or threatens to harm him." *Id.* In the present action, the plaintiffs allegations fit squarely within these parameters. The plaintiffs in the Fourth Amended Complaint, their Request for Trial, and their Supplemental Complaint listed the specific compartments where the Forest Service allegedly violated the NFMA through its clearcutiing, timber harvesting, and even-age logging practices. The plaintiffs were able to reduce their more general allegations to a manageable proportion that allowed the district court to conduct a bench trial on specific compartments of land in the Texas forest. Contrary to the intimation of the majority opinion, the experienced trial judge below was not oblivious to the parameters of *Lujan* when he embarked on the trial at issue. *See Sierra Club v. Glickman*, 974 F.Supp. 905, 914.

Unlike the majority, I view the allegations made by plaintiff Sierra Club in the present case to be strikingly similar to the allegations made by the Sierra Club in *Sierra Club v. Martin*, 168 F.3d 1 (11th Cir. 1999). In *Martin*, the plaintiffs challenged the "Forest Service's decision to allow seven

timber sales . . . which will enable logging (including clearcutting), road building and related activities." *Id.* at 2. Although the sales had not been completed the court concluded that the plaintiffs were "entitled to challenge the Forest Service's compliance with the [LRMP] as part of its site-specific challenge to the timber sales . . . a contrary result would effectively make it impossible for a plaintiff to ever seek review of the Forest Service's compliance with a Forest Plan." *Id.* at 6. In the present case, as in *Martin*, the plaintiffs have challenged the Forest Service's decision to allow timber sales which enable clearcutting. Similarly to *Martin*, the plaintiffs made site-specific challenges to timber sales, which enabled even aged timber management practices to occur which they claimed violated the NFMA.

Moreover, although the majority opinion and this dissent focus on the issue of final agency action, it is important to note that there was much more at stake in this litigation besides this court's differing interpretations of case law. The district court found on the merits that the Forest Service had violated and was continuing to violate the NFMA through their management practices. *See Glickman*, 974 F.Supp. at 911-12. The district court found, *inter alia,* that the Forest Service's even-aged management practices were causing severe erosion of soil which permanently impairs the productivity of the forest land. *See id.* at 926. In this appeal, the Forest Service did not challenge these findings made by the district court. To the extent that the majority opinion has made it more difficult for plaintiffs to challenge NFMA violations committed by the Forest Service this decision by our court may contribute to the erosion of the natural resources in the Texas national forests. Mindful of these

practical implications of the majority opinion and the applicable case law I respectfully dissent.

APPENDIX B

UNITED STATES COURT OF APPEALS
FOR THE FIFTH CIRCUIT

[Filed August 16, 1999]

No. 97-41274

SIERRA CLUB; WILDERNESS SOCIETY; TEXAS COMMITTEE ON NATURAL RESOURCES,
Plaintiffs - Appellees,

v.

R. MAX PETERSON; et al.,
Defendants,

DANIEL GLICKMAN, In his official capacity as the Secretary of the Department of Agriculture; GLORIA MANNING, In her official capacity as the Regional Forester, U.S. Forest Service, Region 8; MICHAEL DOMBECK, In his official capacity as Chief, U.S. Forest Service; RONALD RAUM, In his official capacity as the Forest Supervisor, National Forests and Grasslands in Texas,
Defendants - Appellants,

TEXAS FORESTRY ASSOCIATION; SOUTHERN TIMBER PURCHASERS

COUNCIL,)
Intervenor - Defendants - Appellants)
)

Appeals from the United States District Court
for the Eastern District of Texas

Before POLITZ, EMILIO M. GARZA, and STEWART, Circuit Judges.

CARL E. STEWART, Circuit Judge:

This case is the latest iteration of a fourteen-year dispute between several environmental groups (the Sierra Club, the Wilderness Society, and the Texas Committee on Natural Resources ("TCONR"), collectively, "Appellees," or, "environmental protection organizations") and the U.S. Department of Agriculture, through the U.S. Forest Service ("Forest Service"). Also participating in this litigation since 1993 and for purposes of this appeal are the Texas Forestry Association and the Southern Timber Purchasers Council (collectively, "Timber Intervenors," and, with the Forest Service, "Appellants"). Although the parties dispute how to characterize the district court's actions in this case--whether the court conducted a "de novo trial" or merely "took evidence"--both sides agree, in broad terms, that the crux of this appeal is whether the National Forest Management Act of 1976 ("NFMA"), Pub. L. No. 94-588, 90 Stat. 2949 (codified at 16 U.S.C. § 1604 (1994)), contains substantive requirements that a court may enforce through the mechanism of an injunction after conducting a bench trial. The district court found that it did and enjoined timber harvesting in the affected National Forests as a result of the Forest Service's

failure to comply with various Congressional mandates. Because we believe that this ruling, and the court's decision to collect information itself that enabled it to arrive at this conclusion, was appropriate, we affirm the judgment of the district court.

I

The factual background to this case concerns the responsibilities of the Forest Service with respect to the maintenance and management of the National Forests in Texas. Before addressing the specific events precipitating this lawsuit, we believe it important to describe the history of the National Forest System and the role that Congress has required the Forest Service to play in their management.

A

The National Forest System, which is administered by the Forest Service, was established in the latter part of the nineteenth century "for the purpose of securing favorable conditions of water flows, and to furnish a continuous supply of timber for the use and necessities of citizens of the United States." Organic Administration Act of 1897 § 1, 16 U.S.C. § 475 (1994). Over a half-century later, Congress broadened the permissible uses of National Forests with the Multiple-Use Sustained-Yield Act of 1960, Pub. L. No. 86- 517, 74 Stat. 215 (codified at 16 U.S.C. §§ 528-531 (1994)), and, in 1974, it enacted the Forest and Rangeland Renewable Resources Planning Act ("RPA"), Pub. L. No. 93-378, 88 Stat. 476 (codified at 16. U.S.C. §§ 1600-1614 (1994)). In 1976, the NFMA amended the RPA. Because of widespread public distress and scientific concern over the Forest Service's post-

World War II shift to massive, heavily-subsidized timber production in the National Forests,[1] Congress for the first time required the Forest Service to implement a "land and resource management plan" ("LRMP") for each national forest or group of national forests. *See* NFMA § 6(a), 16 U.S.C. § 1604(a). This management plan must "provide for multiple use and sustained yield of the products" from the national forests, *id.* § 6(e)(1), 16 U.S.C. § 1604(e)(1), and must be accompanied by regulations that "specify [ ] guidelines for land management plans," *id.* § 6(g)(3), 16 U.S.C. § 1604(g)(3). If more destructive techniques such as even-aged management[2] are to be employed, then they must

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[1] A significant component of this shift was a change from selection harvesting to clearcutting, a concededly much more destructive form of timber management. Clearcutting and other forms of even-aged management, *see infra* note 2 and accompanying text, result in the removal of almost all above-ground woody vegetation.

[2] "Even-aged management" refers to a forest management system in which a stand of timber of generally uniformly-aged trees is maintained through maturity. *See* 36 C.F.R. § 219.3. Even-aged methods are clearcutting, seedtree cutting, or shelterwood cutting. Clearcutting involves removing most or all of the merchantable trees, followed by site preparation, and then regeneration, usually requiring planting. Seedtree cutting involves removing most of the merchantable trees, leaving approximately 10 trees per acre to produce seed to regenerate the next stand.

Shelterwood cutting involves leaving approximately 20 trees per acre for the dual purpose of providing seed for regeneration and some shelter for the regenerating trees. *See Sierra Club v. Espy* ("*Sierra Club I* "), 38 F.3d 792, 795-96 (5th Cir.1994). "Even-aged management" may be contrasted with "uneven-aged management," also known as "selection management." Uneven-aged management encompasses both single tree selection and group selection and results in stands containing trees of different ages. Group selection involves cutting small

be carried out consistent with soil and watershed protection, and the harvesting must be monitored to note the effects of the practices on key resources and wildlife. *See id.* § 6(g)(3)(F), 16 U.S.C. § 1604(g)(3)(F).

The LRMP planning regulations are codified at 36 C.F.R. pt. 219 (1999). The regulations state that the "[p]lans guide all natural resource management activities and establish management standards and guidelines for the National Forest System" and that "[t]hey determine resource management practices, levels of resource production and management, and the availability and suitability of lands for resource management." 36 C.F.R. § 219.1(b). The regulations cover, inter alia, general procedures, content, and process requirements for forest planning. They require that an LRMP incorporate the establishment of forest-wide multiple-use goals and objectives,[3] *see id.* § 219.11(b); of forest-wide

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patches of trees, while single tree selection involves selecting particular trees for cutting. *See* 36 C.F.R. § 219.3.

[3] Section 219.27 sets out minimum specific management requirements to be met in accomplishing the goals and objectives of the National Forest System. These requirements "guide the development, analysis, approval, implementation, monitoring and evaluation of forest plans," 36 C.F.R. § 219.27, and include provisions regarding the conservation of soil and water resources. For example,
(1) § 219.27(a)(1): "All management prescriptions shall [c]onserve soil and water resources and not allow significant or permanent impairment of the productivity of the land." (2) § 219.27(b)(5): management prescriptions that involve vegetative manipulation of tree cover shall "[a]void permanent impairment of site productivity and ensure conservation of soil and water resources."
(3) § 219.27(c)(6): "Timber harvest cuts designed to regenerate an even-aged stand of timber shall be carried out in a manner consistent with the protection of soil, watershed, fish and wildlife,

management requirements in the form of standards and guidelines, *see id.* §§ 219.13-.27; and of management area direction and prescriptions applying to future management activities in that management area, *see id.* § 219.11(c). Each LRMP shall also contain "[m]onitoring and evaluation requirements that will provide a basis for periodic determination and evaluation of the effects of management practices." *Id.* § 219.11(d).

Also of relevance to the instant dispute is § 219.19, which concerns fish and wildlife resources. It provides that "[f]ish and wildlife habitat shall be managed to maintain viable populations of existing native and desired non- native vertebrate species in the planning area." *Id.* § 219.19. This subsection then introduces the concept of "management indicator species" ("MIS") by providing that

> [i]n order to estimate the effects of each alternative [considered in the draft and final LRMPs and accompanying environmental impact statements] on fish and wildlife populations, certain vertebrate and/or invertebrate species present in the area shall be identified and selected as management

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recreation, and aesthetic resources, and the regeneration of timber resources."

(4) § 219.27(e): concerns riparian areas and provides that special attention be given "to land and vegetation for approximately 100 feet from the edges of all perennial streams, lakes, and other bodies of water" and precludes management practices having certain adverse impacts on such waterbodies.

(5) § 219.27(f): provides additional instruction applicable to the conservation of soil and water resources.

> indicator species and the reasons for their selection stated. These species shall be selected because their population changes are believed to indicate the effects of management activities.

Id. § 219.19(a)(1). The subsection further provides that "[p]opulation trends of the management indicator species will be monitored and relationships to habitat changes determined." *Id.* § 219.19(a)(6).

B

The Forest Service administers approximately 639,000 acres of National Forest lands in eastern Texas. These National Forest lands are divided into four National Forests: the Sam Houston, the Angelina, the Sabine, and the Davy Crockett ("Texas National Forests"). Almost all of what are now the national forest lands in eastern Texas were purchased by the United States in the 1930s and 1940s pursuant to the Weeks Act of 1911 § 6, ch. 186, 36 Stat. 961 (codified as amended at 16 U.S.C. § 515 and scattered sections (1994)). Today, the National Forest lands comprise approximately 37% of the total amount of land within the forests' proclamation boundaries.

Most of the forested lands in eastern Texas were intensively logged near the turn of the century while they were still in non-federal ownership. Consequently, the present timber stands on the national forest lands are comprised mostly of second growth. The Forest Service began practicing even-aged timber management techniques in the Texas National Forests in the early 1960s.

II

The arduous trek of this case through the court system began on April 17, 1985, when the environmental protection groups first challenged the Forest Service's administration of the National Forests in Texas.[4] Early on, Appellees frequently prevailed at the district court on discrete issues: the district court preliminarily enjoined the Forest Service to follow strictly its own guidelines in cutting pine trees to control the spread of the Southern Pine Beetle, *see Sierra Club v. Block*, 614 F.Supp. 134, 141 (E.D.Tex. 1985); and the district court enjoined the Forest Service from clearcutting practices within 100 yards of a red-cockaded woodpecker colony, *see Sierra Club v. Block*, 694 F.Supp. 1255, 1256 (E.D.Tex. 1987) (Parker, J.).

After 1987, the proceedings diverged along two separate, yet parallel, tracks. On the first were Appellees' claims that even-aged management techniques violated the NFMA and its associated regulations. The second track concerned Appellees' efforts to protect the habitat of the red-cockaded woodpecker. While the instant case represents the

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[4] While not directly relevant to the instant matter, the history of the proceedings from 1985 through 1993 is described in this court's decision in *Sierra Club I*, 38 F.3d at 796-98. Primarily, the suit focused on the Forest Service's practice of cutting trees within the wilderness area of the four Texas National Forests to control the Southern Pine Beetle; this practice affected other species as well, most importantly the red-cockaded woodpecker, an endangered species. *See Sierra Club I*, 38 F.3d at 796; *see also* Endangered Species Act of 1973 § 2, 16 U.S.C. § 1531(a) (1994) (requiring protection of endangered species such as this woodpecker).

terminus of that first line, we will summarize below the procedural history of the twin paths of this litigation, first addressing the woodpecker litigation.

A

Beginning in 1987, Appellees[5] sought review of the Texas Forest Plan of 1987 ("1987 Plan"), issued pursuant to NFMA § 6, 16 U.S.C. § 1604, and the focus of the litigation shifted in part from protecting the habitats of specific species to questioning the legitimacy of the Forest Service's practices as a whole. Originally, the district court partially dismissed Appellees' challenge to the validity of the 1987 Plan for failure to exhaust administrative remedies. *See Sierra Club v. Lyng*, 694 F.Supp. 1256, 1259 (E.D.Tex. 1988) (Parker, J.). Several months later, however, having conducted a trial on the matters which were ripe for judicial determination, the district court found the Forest Service to be in violation of the Endangered Species Act of 1973 ("ESA"), 16 U.S.C. §§ 1531-1543 (1985) with respect to the red- cockaded woodpecker and permanently enjoined the Forest Service's even-aged management techniques, requiring the Forest Service to produce a comprehensive new plan to provide protection for the woodpecker. *See Sierra Club v. Lyng*, 694 F.Supp. 1260, 1269-73, 1277-78 (E.D.Tex. 1988) (Parker, J.). The district court subsequently rejected that new plan.

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[5] For simplicity's sake, the action of any individual Appellee is attributed to all Appellees. For instance, only TCONR initially challenged the 1987 Plan, but now each Appellee has as its rallying cry the injunction of the 1987 Plan.

On appeal from those two orders, this court affirmed in part and vacated in part. *See Sierra Club v. Yeutter*, 926 F.2d 429 (5th Cir. 1991). We found that the district court correctly enjoined the Forest Service from violating the ESA but impermissibly dictated the result of an administrative process by requiring the Forest Service to proceed with developing a new plan in a predetermined manner. *See id.* at 439-40.

In the interim, the Forest Service determined that it would issue a new LRMP in light of the continuing litigation.[6] In 1992, the Forest Service sought the district court's approval of Interim Guidelines for the protection and management of the red-cockaded woodpecker's habitat and requested that the district court lift its injunction barring the agency from adopting the Interim Guidelines. The district court reviewed the Interim Guidelines and held that they, too, violated the Endangered Species Act. The Forest Service appealed that decision, and this court vacated and remanded once again. *See Sierra Club v. Glickman*, 67 F.3d 90, 97 (5th Cir. 1995).

B

On the parallel line, and the more significant one for the instant case, the Forest Service determined while developing its Interim Guidelines that, pending the completion of the new plan, decisions regarding the selection of timber management systems would be made at the site-specific level, and that even-aged timber management harvesting could be

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[6] That revised LRMP for Texas National Forests was not issued until March 28, 1996.

employed if the Forest Service determined it to be appropriate to meet the objectives and requirements of the 1987 Plan.

Appellees objected to this determination, arguing anew that even-aged timber management, as practiced in Texas National Forests, was in violation of the NFMA. In an amended complaint, Appellees requested a preliminary injunction barring the Forest Service from proceeding with certain proposed timber sales that called for even-aged harvesting. The district court granted that injunction with respect to nine timber sales, *see Sierra Club v. Espy*, 822 F.Supp. 356, 370 (E.D.Tex. 1993) (Parker, C.J.), but this court vacated and remanded,[7] *see Sierra Club v. Espy*, 38 F.3d 792, 803 (5th Cir. 1994) ("*Sierra Club I* ").

In *Sierra Club I*, we held that the district court erred as a matter of law by restricting even-aged timber management in the Texas National Forests to exceptional circumstances because the NFMA does not prohibit such techniques. *See id.* at 795-96. Additionally, the court determined that the district court abused its discretion by concluding, contrary to the Forest Service's expert determination, that timber sales from even-aged management conflicted with the NFMA.[8] *See id.* at 798-802. Finally, the

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[7] While review of the 1993 district court order was pending, the Timber Intervenors moved to intervene in the action, which the district court denied. This court reversed, holding that the Timber Intervenors were allowed to intervene as of right. *See Sierra Club v. Espy*, 18 F.3d 1202, 1208 (5th Cir. 1994).

[8] The NFMA requires, inter alia, that the Forest Service publish plans designed to protect natural resources and ensure biodiversity when making decisions concerning the National Forests. *See* 16 U.S.C. § 1604(g). The Act also requires the Forest

court held that the environmental assessments prepared by the Forest Service for timber sales appeared likely to satisfy statutory requirements, and thus, the environmental protection groups were not entitled to a preliminary injunction against the sales. *See id.* at 802-03.

After the *Sierra Club I* remand, the environmental protection organizations argued that the Forest Service's on-the-ground activities in carrying out even- aged timber management practices in site-specific areas violated the NFMA with respect to the diversity of plant and animal communities and the protection of resources in specific areas of the Texas National Forests, *see* 16 U.S.C. §§ 1604(g)(3)(B), (F)(v), and also with respect to inventorying and monitoring for diversity and resource protection in these Forests, *see id.* §§ 1604(g)(2)(B), (3)(C). Appellees also alleged that the Forest Service had violated its own regulations, *see* 36 C.F.R. pt. 219, and requested an injunction against future even-aged logging until those violations are rectified.

Although the Forest Service and the Timber Intervenors opposed any trial of these issues on the ground that judicial review of timber sales is limited to the administrative record compiled by the agency, and that no such record existed in this case, the court set the case for trial.[9] Following a continuance, the trial commenced on April

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Service to engage in periodic inventorying and monitoring of the National Forests. *See id.*

[9] The district court found "that there are genuine issues of material fact with respect to whether the Forest Service has in practice implemented the regulations governing even-aged

2, 1996, and lasted for seven days. Post-trial briefing was completed in June 1996. On August 14, 1997, the district court issued a memorandum opinion, order, and injunction, and a judgment on findings of fact and conclusions of law.

At the outset of its opinion, the court concluded that "[u]nder the [Administrative Procedure Act of 1946 ('APA'), 5 U.S.C. §§ 551, 701- 706 (1994)], this court has jurisdiction to review the Forest Service's failure to act with respect to alleged on-the-ground violations of the NFMA and regulations." *See Sierra Club v. Glickman*, 974 F.Supp. 905, 914 (E.D.Tex. 1997). The court stated that

> The Forest Service's failure to implement timber sales in compliance with the NFMA and regulations, as alleged by Plaintiffs, is a

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management of the national forests." Its order, issued August 22, 1995, identified three issues for trial:
(1) Whether the Forest Service has, in practice, as required by the regulations, kept current and adequate inventories and monitoring data for key resources in the national forests in Texas; (2) Whether the Forest Service has, in practice, as required by the regulations, protected key resources in its application of even-aged management techniques; and (3) Whether the Forest Service has, in practice, as required by the regulations, provided for the diversity of plant and animal communities in its application of even-aged management techniques. *Sierra Club v. Glickman*, 974 F.Supp. 905, 912 (E.D.Tex. 1997). The court also denied the Forest Service's and Timber Intervenors' motion for summary judgment, holding that it "ha[d] the authority and jurisdiction to go beyond review of any record made by the Forest Service on these three issues and receive evidence on whether the Forest Service has in practice implemented its regulation" and that "[a] failure by the Forest Service to follow the [NFMA], its own regulations, and the [LRMP] must be said to be 'arbitrary and capricious' and therefore contrary to law."

> final agency action for purposes of [APA] section 704. Once the Forest Service adopted a final, definite course of action or inaction with respect to the management of the forest lands (regardless of whether that action or inaction is memorialized in a written agency decision), the court has a "final agency action" to review. A contrary view, held by the Federal Defendants and Timber Intervenors, would put all of the Forest Service's on-the-ground violations of the NFMA and regulations beyond judicial review. Under this view, the Forest Service seeks absolute immunity from its on-the-ground management activities.

Id. at 914-915. The court also determined that the even-aged claims were not rendered moot by the issuance of the 1996 revised LRMP, *see id.* at 915 n. 7, and that the "arbitrary and capricious" standard of review set out in APA § 10, 5 U.S.C. § 706, was the appropriate guideline and that the NFMA and its attendant regulations provided the relevant "law to apply." *Id.* at 915- 916.

Turning to the merits, the court determined that the Forest Service had violated and was continuing to violate the NFMA concerning the protection of soil and watershed resources and concerning inventorying and monitoring for wildlife and diversity. *See id.* at 911-12. In particular, as noted above, the court held that the Forest Service had

violated NFMA § 6(g), 16 U.S.C. § 1604(g), in several respects.[10] *See id.* at 926.

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[10] Specifically, the district court held that the Forest Service had violated § 6(g)(2)(B), 16 U.S.C. § 1604(g)(2)(B), which requires the formulation of regulations that "provide for obtaining inventory data on various renewable resources, and soil and water;" § 6(g)(3)(C), 16 U.S.C. § 1604(g)(3)(C), which requires regulations that "specify guidelines for land management plans developed to achieve the goals of the Program . . . [by] insur[ing] research on and (based on continuous monitoring and assessment in the field) evaluation of the effects of each management system to the end that it will not produce substantial and permanent impairment of the productivity of the land;" § 6(g)(3)(E)(i), (iii), 16 U.S.C. § 1604(g)(3)(E)(i), (iii), which requires that the guidelines "insure that timber will be harvested from National Forest System lands only where--soil, slope, or other watershed conditions will not be irreversibly damaged; . . . protection is provided for streams, streambanks, shorelines, lakes, wetlands, and other bodies of water from detrimental changes in water temperatures, blockages of water courses, and deposits of sediment, where harvests are likely to seriously and adversely affect water conditions or fish habitat;" and § 6(g)(3)(F)(v), 16 U.S.C. § 1604(g)(3)(F)(v), which requires that the guidelines

> "insure that clearcutting, seed tree cutting, shelterwood cutting, and other cuts designed to regenerate an even-aged stand of timber will be used as a cutting method on National Forest System lands only where . . . such cuts are carried out in a manner consistent with the protection of soil, watershed, fish, wildlife, recreation, and esthetic resources, and the regeneration of the

With respect to soil resources, the district court found that the Forest Service's even-aged timber management practices were causing substantial and permanent damage to the soil in the National Forests. *See id.* The court stated that

> The Forest Service is neither protecting nor conserving the key resource of soil. Forest Service management practices, which have been primarily even-aged, are causing severe erosion of soil from the forest landscape and related loss of organic matter. This soil loss is substantially and permanently impairing the productivity of the forest land and possibly timber production. *Id.*

Similarly, the court found that the Forest Service's even-aged management practices "have caused substantial and permanent . . . sediment deposit in streams and waterways," *id.* at 927, and that "[t]he Forest Service is neither protecting nor conserving the key resource of watershed," *id.* at 928. The court's conclusion was based on its finding that the agency's "on- the-ground" practice was to ignore the standards and guidelines established by the 1987 Plan for the protection of watercourses. *See id.* at 927.

Next, the court concluded that the Forest Service failed to carry out its inventorying and monitoring obligations

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timber resource."

concerning certain wildlife resources.[11] *See id.* at 931. The court noted that the Forest Service had acknowledged that, with certain exceptions, it does not monitor the populations of the wildlife species which were selected in the 1987 Plan and the 1996 revised LRMP as Management Indicator Species because such monitoring and inventorying is "not practical." *Id.* at 932. Based on this concession, the court found that "[t]he Forest Service is not adequately inventorying or monitoring: (1) populations of some wildlife MIS; (2) diversity in terms of its prior and present condition; and (3) its management activities as to whether it is meeting objectives and adhering to management standards and guidelines." *Id.* at 933. Consequently, "[t]he Forest Service's failure to adequately inventory and monitor may be causing permanent and substantial damage to the productivity of the land." *Id.* at 912.

Because it found the Forest Service's actions to be arbitrary and capricious, the court then enjoined the Forest Service and the Timber Intervenors "from future timber harvesting until such time that the Forest Service (1) complies with the NFMA and regulations with respect to the implementation of past timber sales and (2) assures the court that any future timber harvests will be in compliance on-the-ground." *Id.* at 945. Harvesting could begin again after further order of the court or modification of the injunction. *See id.* Additionally, in a September 8, 1997, order, the court entered an "Order Granting Agreed Motion for Partial

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[11] The court found, however, that the Forest Service had not violated the NFMA with respect to ensuring diversity, protecting fish, wildlife, recreation, aesthetic, and timber resources, and inventorying and monitoring those resources. *See id.* at 942.

Temporary Stay of Injunction," allowing activities on fourteen active timber sales contracts to continue. This order also provided that the Forest Service "shall implement the Inventorying and Monitoring Guidelines" set forth by statute.

III

Before ruling on the propriety of the injunction, two additional issues confront us as we review the district court's thorough and well-reasoned opinion in the instant matter. First, although neither the Forest Service nor the court below addressed the issue, we must consider sua sponte whether the district court should have heard this case, that is, whether Appellees had standing to bring their claims in federal court.[12] *See Bender v. Williamsport Area Sch. Dist.*, 475 U.S. 534, 541, 106 S.Ct. 1326, 89 L.Ed.2d 501 (1986). Second, if we determine that they did have standing, we must review whether subject-matter jurisdiction existed allowing the district court to conduct a trial on the merits and, subsequently, to issue an injunction against the Forest Service.

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[12] Although the dissent decries our review of Appellees' claims in the context of Article III's standing requirements, lamenting that "[t]his case is not about whether the Environmentalist Groups have Article III standing," post at 375, we note our responsibility to confirm standing, even where such a review ultimately leads us to conclude that the complainants did in fact have standing to bring their claims.

A

In *Steel Co. v. Citizens for a Better Environment*, 523 U.S. 83, 118 S.Ct. 1003, 140 L.Ed.2d 210 (1998), the Supreme Court recently reminded us that

> Article III, § 2 of the Constitution extends the "judicial Power" of the United States only to "Cases" and "Controversies." We have always taken this to mean cases and controversies of the sort traditionally amenable to and resolved by the judicial process. Such a meaning is fairly implied by the text, since otherwise the purported restriction upon the judicial power would scarcely be a restriction at all. Every criminal investigation conducted by the Executive is a "case," and every policy issue resolved by congressional legislation involves a "controversy." These are not, however, the sort of cases and controversies that Article III, § 2, refers to, since "the Constitution's central mechanism of separation of powers depends largely upon common understanding of what activities are appropriate to legislatures, to executives, and to courts." Standing to sue is part of the common understanding of what it takes to make a justiciable case.

523 U.S. at ---- , 118 S.Ct. at 1016 (quoting *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 559-60, 112 S.Ct. 2130, 119 L.Ed.2d 351 (1992) ("*Lujan II* ")) (other citations omitted).

At an "irreducible constitutional minimum," a plaintiff must establish three elements to have standing. *Id.* at --, 118 S.Ct. at 1016. First, the plaintiff must show that it has suffered "an injury in fact--a harm suffered by the plaintiff that is concrete and actual or imminent, not conjectural or hypothetical." *Id.* at --, 118 S.Ct. at 1016 (internal quotation omitted). Second, the plaintiff must establish "causation-a fairly traceable connection between the plaintiff's injury and the complained-of conduct of the defendant." *Id.* at --, 118 S.Ct. at 1016 (internal citation omitted). Lastly, "there must be redressability--a likelihood that the requested relief will redress the alleged injury." *Id.* at --, 118 S.Ct. at 1017 (internal citation omitted).

At its most rudimentary, Appellees' suit is an attempt to force the Forest Service to comply with the procedural requirements of the NFMA and its regulations. While we agree with our sister circuit that "the particular nature of a case does not-and cannot-eliminate any of the 'irreducible' elements of standing," *Florida Audubon Soc'y v. Bentsen*, 94 F.3d 658, 664 (D.C.Cir. 1996), the Supreme Court has counseled that, in a procedural rights case such as the one at bar, a plaintiff is not held to the normal standards for redressability and immediacy, *see Lujan II*, 504 U.S. at 573 n. 7, 112 S.Ct. 2130; *see also Sierra Club v. Glickman*, 156 F.3d 606, 613 (5th Cir. 1998) (interpreting *Lujan II*). Of course, a procedural rights plaintiff cannot gain standing merely because of the Government's alleged failure to comply with relevant procedural requirements. *See Lujan II*, 504 U.S. at 573, 112 S.Ct. 2130. Instead, a plaintiff

> must show an injury that is both concrete and particular, as opposed to an undifferentiated

> interest in the proper application of the law. Likewise, the plaintiff must establish that the injury is fairly traceable to the proposed government action or inaction. Finally, although a procedural rights plaintiff is not held to the normal standards for redressability, in the sense that the plaintiff need not show that the procedural remedy that he is requesting will in fact redress his injury, the plaintiff must nonetheless show that there is a possibility that the procedural remedy will redress his injury. In order to make this showing, the plaintiff must show that "the procedures in question are designed to protect some threatened concrete interest of [its] that is the ultimate basis of [its] standing."

Sierra Club v. Glickman, 156 F.3d at 613 (quoting *Lujan II*, 504 U.S. at 573 n. 8, 112 S.Ct. 2130).

In this case, we are persuaded that Appellees made just such a showing and that, consequently, the district court had jurisdiction to hear their claims. As we will describe infra, Appellees' complaints were alleged with adequate specificity to meet the constitutional, statutory, and prudential doctrines of standing that bind the federal courts. In reaching this conclusion, we examined the requirements of *Lujan v. National Wildlife Federation*, 497 U.S. 871, 110 S.Ct. 3177, 111 L.Ed.2d 695 (1990) ("*Lujan I*") and its progeny (*Lujan II* and *Steel Co.*). Although these decisions substantially altered federal jurisprudence for plaintiffs seeking standing in

procedural rights cases,[13] our recourse to those cases confirms, rather than undermines, our belief that Appellees' claims against the Forest Service were properly before the district court.

Consequently, we find the jurisdictional issue raised by the dissent to be a phantom one.[14] Our analysis under

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[13] While we decline at this juncture to join the still-raging debate over just how much *Lujan I* changed standing requirements, compare *Steel Co.*, 523 U.S. at ---- n. 5, 118 S.Ct. at 1017 n. 5 ("Although we have packaged the requirements of constitutional 'case' or 'controversy' somewhat differently in the past 25 years-an era rich in three-part tests-the point has always been the same: whether a plaintiff 'personally would benefit in a tangible way from the court's intervention.' ") (citation omitted) with *Steel Co.*, 523 U.S. at ----, 118 S.Ct. at 1027 (Stevens, J., concurring in the judgment) (" [Redressability] is a judicial creation of the past 25 years.") (collecting cases), it seems safe (and sage) to note that *Lujan I* likely eviscerated certain prior cases that afforded procedural rights plaintiffs standing where the three-part test was not met, *see, e.g., United States v. Students Challenging Regulatory Agency Procedures (SCRAP)*, 412 U.S. 669, 683-685, 93 S.Ct. 2405, 37 L.Ed.2d 254 (1973) (laying out expansively the elements sufficient for review under § 702 of the APA).

[14] It is instructive, although not dispositive, to note that Appellants devote scarce attention to Appellees' standing. Appellants instead challenge at length the district court's decision to develop a record in this case. Additionally, the district court, in its exhaustive opinion, similarly does not question Appellees' right to bring the case before the court. In the *post-Lujan I* era in which requirements for standing are imposed in an especially constraining manner, if Appellees arguably lacked Article III standing, it would be reasonable to assume that the Government and the Timber Intervenors would have focused almost exclusively on this argument. That they do not, and instead challenge with great emphasis the district court's factfinding, suggests that a *Lujan I* analysis is not the answer here. Of course, this observation in no way contradicts our obligation to examine standing; it is merely

Lujan I and its progeny convinces us that Appellees were properly before the court. The dissent's hallowed view of *Lujan I* would eliminate all but the narrowest types of procedural rights suits, but we remain of the view that *Lujan I* is primarily a case involving the ripeness of claims. In *Lujan I*, a national wildlife group challenged the entire "land withdrawal review program" of the Bureau of Land Management ("BLM"). *See Lujan I*, 497 U.S. at 879-81, 110 S.Ct. 3177. This program determined the status of public land and its availability for private uses such as mining. *See id.* at 879, 110 S.Ct. 3177. The plaintiffs claimed a right to challenge the BLM's decisions under § 10(a) of the APA, 5 U.S.C. § 702, which provides that "[a] person suffering legal wrong because of agency action, or adversely affected or aggrieved by agency action within the meaning of a relevant statute, is entitled to judicial review thereof." *Id.* at 882, 110 S.Ct. 3177. The Supreme Court determined that the plaintiffs did not satisfy § 702's requirements for judicial review because they failed to identify an "agency action" within the meaning of § 702. *See id.* at 892-93, 110 S.Ct. 3177. The court held that neither the allegations of the complaint nor the supporting affidavits "enable the respondents to challenge the entirety of the so-called 'land withdrawal review program.'" *Id.* at 890, 110 S.Ct. 3177. The Supreme Court, then, denied standing because the plaintiffs failed to meet the statutory requirement that they be adversely affected or aggrieved by an agency action. *See id.*

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curious that none of these sophisticated parties even raised the issue. We also note with interest that the Eleventh Circuit, in a recent case involving the same issue and the same parties, did not even pause to address the standing issue, principally because there is no issue. *See Sierra Club v. Martin*, 168 F.3d 1 (11th Cir. 1999). We analyze the *Martin* decision infra, Section III.B.3.

Because the *Lujan I* plaintiffs challenged generic agency action and offered no proof that they had yet been harmed by any specific action, the Supreme Court's determination essentially concerns the ripeness of claims. *See id.* at 890-91, 110 S.Ct. 3177. In *Lujan I*, no case or controversy existed because the plaintiffs had not alleged justiciable injury; in the matter at bar, however, Appellees alleged particularized injury and supported their allegations with voluminous evidence of individualized harm. Additionally, Appellees pointed to specific violations of specific laws in challenging the timber sales that had resulted from even-aged timber management by the Forest Service. To suggest that Appellees' challenge in this case is a generic one and tantamount to the challenge in *Lujan I* is to equate apples and oranges; Appellees' challenge here demonstrates that environmental plaintiffs have learned to work within *Lujan I's* rubric by particularizing the injuries that they allege.[15] The justiciability of the injuries alleged in the two complaints (and the evidence presented to support the claims) are miles apart legally and persuasively. We note at least three ways in which the two claims are conceptually distinct.

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[15] The dissent chides us for "conflat[ing] the standing requirements of Article III with *Lujan I's* discussion of the APA's 'final agency action' requirement." Post at 377. We read *Lujan* to require particularized injury suffered in the context of final agency action such that our analysis encompasses both issues. Just as a complaining party must demonstrate an injury to prove standing, *see Lujan I*, 497 U.S. at 882-90, 110 S.Ct. 3177, so too must the party establish subject matter jurisdiction by pointing to a final agency action by which its injury was sustained, *see American Airlines, Inc. v. Herman*, 176 F.3d 283, 287 (5th Cir. 1999). We find that the Appellees have fulfilled both requirements in this case.

First, as indicated above, the ripeness of Appellees' claims is not truly an issue in this case.[16] Although the Forest Service argues briefly that the claims in this case are not ripe because future timber sales have not occurred, this argument is unavailing and skirts the true question. This case involves a decision by the Forest Service to permit even- aged timber management--and future timber sales--on specific plots of National Forest land. Naturally, there may be no future sales

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[16] Although the dissent accords talismanic significance to *Ohio Forestry Ass'n v. Sierra Club*, 523 U.S. 726, 118 S.Ct. 1665, 140 L.Ed.2d 921 (1998), that case is both easily distinguished and supportive of allowing standing in this case. In *Ohio Forestry*, a unanimous Supreme Court held that the Sierra Club's challenge to an LRMP adopted by the Forest Service was not yet ripe for review. *See* 523 U.S. at ----, 118 S.Ct. at 1668. The Sierra Club argued that the plan permits too much logging and clearcutting in an Ohio National Forest, *see id.* at ---- , 118 S.Ct. at 1668, but the Court reasoned that, while the LRMP sets logging goals, selects the areas of the forest that are suited to timber production, and determines "probable methods of timber harvest," it "does not itself authorize the cutting of any trees," *id.* at ---- , 118 S.Ct. at 1668. Before the Forest Service could cut trees, it must follow the NFMA and its attendant regulations to insure that the logging is lawful. *See id.* at ----, 118 S.Ct. at 1668. These are crucial differences from the case at bar. Here, the Forest Service has authorized logging pursuant to an LRMP and has approved sales of the timber logged. It is axiomatic that, while Ohio Forestry stands for the proposition that "abstract disagreements over administrative policies" will not make a controversy ripe, *id.* at ----, 118 S.Ct. at 1672 (citation omitted), disagreements over final, specific agency action are necessarily ripe. Furthermore, Appellees in the instant case allege that the Forest Service has not abided by the NFMA and its regulations in the actual decisions to use even-aged management and not to inventory and to monitor; the Forest Service had not even reached the point of implementing the statute on-the-ground at the time the Ohio Forestry suit was brought.

until the trees have been logged, but it is the logging practices and the failure to inventory and to monitor that Appellees challenge here: specific practices, on specific pieces of land.[17] The practices at issue in *Lujan I* were entirely dissimilar; in that case, the plaintiffs challenged everything about the BLM's policies from soup to nuts, not a site-specific individual policy.

In *Lujan I*, the Supreme Court focused on the allegations of the complaint and turned to accompanying affidavits to search for saving support. At no time did the Court state that well-pleaded allegations in a complaint, if they appropriately identified an "agency action," would not be sufficient to confer standing. *See id.* at 890-98, 110 S.Ct. 3177. The failure of the *Lujan I* plaintiffs--evident in both the complaints and affidavits--was that they sought "wholesale improvement of the [BLM's] program by court decree, rather than in the offices of the Department [of the Interior] or the halls of Congress, where programmatic improvements are normally made." *Id.* at 891, 110 S.Ct. 3177. In the case at bar, Appellees did far more than challenge an amorphous program of the Forest Service;[18] instead, they pointed to specific activities on specific plots in specific National Forests and challenged the mechanism by which the Forest Service determined how to approve those discrete logging practices. In *Lujan I*, the Court opined that

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[17] We further address infra, at Section III.B.2, the question whether the agency's action is final for purposes of review.

[18] Indeed, in *Lujan I*, the "land withdrawal review program" did not even exist; it was merely an arbitrary designation given to several BLM activities.

> It may well be, then, that even those [rules of general applicability adopted by the Bureau] will not be ripe for challenge until some further agency action or inaction more immediately harming the plaintiff occurs. But it is at least entirely certain that the flaws in the entire "program" . . . cannot be laid before the courts for wholesale correction under the APA.

Id. at 892-93, 110 S.Ct. 3177.

Later in his opinion in *Lujan I*, Justice Scalia observed that, while that case was inappropriate for review and judicial intervention, some future case would be ripe for intervention where

> a specific "final agency action" has an actual or immediately threatened effect. Such an intervention may ultimately have the effect of requiring a regulation, a series of regulations, or even a whole "program" to be revised by the agency in order to avoid the unlawful result that the court discerns.

Id. at 894, 110 S.Ct. 3177 (citation omitted). Such is the case here.

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Second, Appellees do not challenge rules of general applicability, but specific applications of those rules; these applications are the "further agency action" that *Lujan I*

contemplated for agency action to ripen. The plaintiffs in *Lujan I* were denied standing because they could not point to a specific final agency action by which they had been aggrieved. Instead, those individuals sought to challenge virtually all of the BLM's activities at the same time. Indeed, when alleging injury, they could only point to their having been prejudiced in their desire to make use of public lands "in the vicinity" of those governed by the BLM. *Id.* at 886, 887, 110 S.Ct. 3177. In other words, they failed the APA's test for judicial review on two statutory levels: they could not show which agency action had aggrieved or injured them and, as a result, they could not point to a "final agency action" which they contested.[19]

The Forest Service admits that an agency decision to conduct a timber sale is subject to judicial review but urges that those decisions may be reviewed only when they actually occur. In this case, the Forest Service argues, the action is not final because the timber sales have yet to take place or even be announced. This argument, while compelling on its face, misses the point that the action which the environmental protection organizations contest is the failure to follow the NFMA regulations; the remedy is the prohibition on future timber sales stemming from even-aged timber management.

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[19] To state that "only one issue"--the district court's jurisdiction to hear this case--governs this appeal, as the dissent does, post at 376, conflates the district court's decision to review the agency's actions in the absence of a record with the propriety of Appellees' claims. We believe, however, that whether the district court can develop a record in this case is not the same question as whether the Appellees have standing to bring these claims or whether they identified final agency actions on which those claims are predicated.

Of course, the action of failing to comply with the NFMA has occurred. The Forest Service implicitly recognizes that its failure to act is "final agency action," but it seeks to dismiss this problematic information by arguing that the environmental protection organizations were not contesting these failures in the original complaint.

Additionally, the even-aged management practices at issue here were specific actions in which the agency engaged, on specific plots of land, and with specific trees in mind. In order for *Lujan I* to be apposite, the environmental protection organizations would have had to challenge the totality of the Forest Service's timber cutting operations, something they did not do. Appellees in the instant case do not demonstrate either of the *Lujan I* plaintiffs' deficiencies in this regard. They insist that they are aggrieved by specific actions on specific land (rather than the wide-ranging complaints in *Lujan I*) and they point to two final agency actions--the decision to engage in timber sales resulting from even-aged management and the failure to inventory and to monitor MIS--as the sources of their injuries.[20]

3

Third, *Lujan I* was a case involving summary judgment. Read with a liberal construction, it stands for the proposition that, in order to survive a motion for summary judgment, plaintiffs must do more than allege injury; they must produce affidavits or other evidence showing the essential kind of injury necessary for recovery under the

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[20] *See infra* Section III.B.2 for a fuller discussion of final agency action.

APA. Indeed, a narrower, yet still plausible reading of *Lujan I* is that it stands only for the proposition that allegations in a complaint must be sufficient to confer standing on their face.

In the case at bar, Appellees' allegations were well-pleaded. They identified specific areas of concern and survived summary judgment; their allegations did not relate to general usage and unfounded criticisms of the Forest Service (as the allegations by the *Lujan I* plaintiffs did). Consequently, Appellees fall out of the *Lujan I* paradigm under this rationale as well. Their claims were settled through the mechanism of a factfinding trial and the issuance of an injunction; the dissent's effort to analogize this resolution to that denied by *Lujan I* mistakenly conflates the distinction between allegations necessary to support a motion for summary judgment and the decision by a district court to enter a preliminary injunction.

B

Having determined that Appellees had standing to bring their case, we turn now to the issue of the district court's action in conducting a trial and issuing an injunction. We review a district court's decision to issue an injunction for abuse of discretion, meaning that the factual underpinnings of the decision are reviewed for clear error, while the application of legal principles is reviewed de novo.[21] *See Alcatel USA,*

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[21] The dissent implies that we should review the district court's opinion de novo, but we decline to follow the faulty logic that would require us to do so. Even *Lujan I*, the dissent's golden child, does not anywhere prescribe or even suggest that the actual question presented to us is one of subject matter jurisdiction demanding de novo review. The jurisdictional "analysis"

Inc. v. DGI Technologies, Inc., 166 F.3d 772, 790 (5th Cir. 1999); *see also Hoover v. Morales*, 164 F.3d 221, 224 (5th Cir. 1998) (observing that a preliminary injunction is an extraordinary remedy that will be overturned only where a district court has abused its discretion). Therefore, while we will consider de novo the district court's application of the APA, if we find that the APA allowed the district court to assume that role, we can invalidate the injunction only if we discover clear error during the fact-gathering process.

1

In its essence, this case is about exhaustion of administrative remedies. Appellants--the Forest Service and the Timber Intervenors--argue that the district court erred in ordering what they style a "de novo" trial in this case because the court did not have the authority to maintain an extra-record proceeding regarding past compliance with the NFMA. In support of their position, the Timber Intervenors stress *Lujan I* for the proposition that the "even-aged timber management practices" enjoined by the district court were not "agency action" as contemplated by the APA, 5 U.S.C.

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contemplated by the dissent is inapposite because, even if Appellees lack standing, the ability of the district court to play a role in this litigation is not truly at issue in this case; put another way, the question is not whether the district court should have dismissed this case for want of jurisdiction. Instead the parties dispute whether the district court's entry of an injunction against the Forest Service's even-aged timber management practices was proper. The correct standard of review, then, is that which we would apply to the entry of any injunction in any case: abuse of discretion.

§ 702. In the absence of an "agency action," Appellants argue, there was nothing for the district court to review; hence, it abused its discretion in ordering and conducting a trial. Appellants further contend that the NFMA is a planning statute devoid of substantive requirements, and that the Forest Service could not "violate" it in any event by engaging in even-aged timber management practices because the statute only stipulates a process that must be followed and not results that must be achieved.

Appellees, on the other hand, argue that the NFMA contains substantive requirements, enforceable by a court, and that the trial was necessary to measure the Forest Service's compliance with those requirements. The Wilderness Society Appellees dispute that the trial was a de novo review, and instead characterize it as fact-gathering on the part of the court in the absence of a record compiled by the Forest Service.

We do not believe that the district court abused its discretion, and we turn again to *Lujan I* for instruction in this matter. In *Lujan I*, the Court enjoyed the benefit of a complete, intensive administrative record that it could review thoroughly before it made its standing determination. In the case at bar, no record existed supporting the Forest Service's actions; indeed, the Forest Service had refused, despite earlier admonitions by this court, to follow the requirements of various statutes and numerous regulations that it had itself enacted and to develop an administrative record of its actions. Although the dissent urges that Appellees "have not argued that the Forest Service has not attempted to comply with the NFMA and its regulations," post at 378, such an argument would have been surfeit since Appellants' response to the

district court's orders was to concede that it had not followed the law and to complain that such requirements were "not practical." *Sierra Club v. Glickman*, 974 F.Supp. at 932. Unlike *Lujan I*, then, in which the Court could look to the administrative record developed by the agency, the district court in this case had no such luxury.[22] Consequently, it determined to develop that record through judicial factfinding. This decision was proper and within the district court's discretion.[23]

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The NFMA lacks a judicial review component, so the judicial review provisions of the APA apply by default. *See, e.g., Wilderness Soc'y v. Alcock*, 83 F.3d 386, 388 n. 5 (11th Cir. 1996) ("Since the NFMA does not provide for judicial review of agency actions taken pursuant to the Act, we have jurisdiction over a challenge under the NFMA only if the agency action is final."); *Sierra Club v. Marita*, 46 F.3d 606, 610 n. 3 (7th Cir. 1995) ("NFMA [does not] . . . explicitly

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[22] *See infra* note 27 & accompanying text.

[23] Appellees in the case at bar could have had neither their claims nor their standing considered in an equally-intense light absent the district court's action because there was no administrative record in this case. In other words, to attack the plaintiffs' standing, as the dissent impliedly does, is based on a reading of the factual, administrative record developed by the district court in this case. The irony is especially staggering considering that the dissent would have us reverse the district court, forcing it to make the baseline standing determination without benefit of any record, thereby prohibiting it from deciding if the Forest Service had indeed aggrieved the plaintiffs through a final agency action.

provide for judicial review of Forest Service decisions. The Sierra Club therefore brought suit under the APA, which stipulates that 'a person suffering a legal wrong because of agency action, or adversely affected or aggrieved by agency action within the meaning of a relevant statute, is entitled to judicial review thereof.' ") (citation omitted). As such, in order to determine whether the district court had the authority to conduct a trial on this subject, we must first look at the structure of the APA to determine the sort of activity in which the Forest Service was engaged that led to the present dispute.[24]

The APA identifies only three types of agency proceedings: rulemaking, *see* 5 U.S.C. § 551(5), adjudication, *see id.* § 551(7), and licensing, *see id.* § 551(9). Under the APA, an "order" is a "final disposition ... of an agency in a matter other than rulemaking." *Id.* § 551(6). In other words, except for rulemaking, an agency's final disposition is necessarily an order. Because the APA further defines "adjudication" as the process for formulating an

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[24] Even recourse to the APA is inappropriate, however, where a plaintiff seeks pre-implementation judicial review of a forest plan, since Congress has not provided for such review. *See Ohio Forestry*, 523 U.S. at ----, 118 S.Ct. at 1672. Other statutes, primarily those contemplating agency "enforcement" as opposed to agency "planning and management," allow such review. *See id.* at ----, 118 S.Ct. at 1672 (noting that the Toxic Substances Control Act, the Surface Mining Control and Reclamation Act, the Resource Conservation and Recovery Act, the Clean Air Act, and the Outer Continental Shelf Lands Act provide for pre-implementation review).

"order," any agency process that results in a final disposition, except for rulemaking, is necessarily adjudication.[25]

These semantic steps are necessary to determine what sort of action the Forest Service undertook with respect to the even-aged timber management in the Texas National Forests. Since the injunction bars even-aged management in the Texas National Forests, it is safe to assume that the Forest Service has, pursuant to the 1987 Plan, approved even-aged harvesting techniques in the Texas National Forests and subsequent sales of timber from those harvests. Notwithstanding both sides' vehement assertions that these actions were not adjudicatory in nature, the approvals did constitute adjudications on the part of the Forest Service.[26]

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[25] The one exception to this broad view of agency practices are the investigation and information gathering aspects of an agency's functioning. An agency's investigation and information gathering might be entirely incidental to rulemaking or adjudication, which is to say that investigation and information gathering might be tools to help an agency determine, inter alia, whether to make a rule or to issue an order.

[26] The dissent takes issue with our classification of this agency action, arguing that an adjudication "implies a hearing . . . after notice, of legal evidence on the factual issues involved" in a dispute. Post at 378 n. 4. Of course, in the context of administrative law, "adjudication" refers not only to the formal trials referenced by the dissent but also to informal adjudications in which the rights of parties are determined. The Supreme Court noted this duality in *Pension Benefit Guar. Corp. v. LTV Corp.*, 496 U.S. 633, 110 S.Ct. 2668, 110 L.Ed.2d 579 (1990). In that case, the Court noted that "formal adjudication" is contemplated by APA §§ 5, 7-8, 5 U.S.C. §§ 554, 556-57, which sections require "that parties be given notice of 'the matters of fact and law asserted,' § 554(b)(3), an opportunity for 'the submission and consideration of facts [and] arguments,' § 554(c)(1), and an opportunity to submit 'proposed findings and conclusions' or 'exceptions,' § 557(c)(1), (2)." *Id.* at

Just as the decision (before and after this court's ruling in *Sierra Club I*) to authorize even-aged management techniques was a type of adjudication, so, too, was the Forest Service's decision not to follow its own regulations with respect to protecting key resources and inventorying and monitoring its resources in the Texas National Forests.[27] Significantly, the action--failing to implement timber sales in

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655, 110 S.Ct. 2668. An "informal adjudication," described in APA § 6, 5 U.S.C. § 555, contains only "minimal requirements," not the full indicia of a procedural undertaking associated with a formal adjudication. *Id.* While the Supreme Court expressed a preference for formal adjudication in the early years of the APA, *see Wong Yang Sung v. McGrath*, 339 U.S. 33, 40, 70 S.Ct. 445, 94 L.Ed. 616 (1950), "[w]ith the passage of time, however, the notion that one should, when in doubt, invoke the APA's procedures has waned," WILLIAM F. FUNK, ET AL., ADMINISTRATIVE PROCEDURE AND PRACTICE 187 (1997). In other words, informal adjudication is by far more prevalent today. For our purposes, it is sufficient to note that an informal adjudication may be something as simple as the Forest Service's reviewing a request for a special use permit, *see Everett v. United States*, 158 F.3d 1364, 1368 (D.C.Cir. 1998), or an agency's decision to release documents pursuant to the Freedom of Information Act, *see Daisy Mfg. Co. v. Consumer Prods. Safety Comm'n*, 133 F.3d 1081, 1083 (D.C.Cir. 1998). Similarly, the Forest Service's several decisions in this case constituted informal adjudications. Regardless, this distinction probably makes little difference in the long run, since all parties also agree that the arbitrary and capricious standard of review was appropriate to apply in this case.

[27] While this reasoning may seem logically stilted, by process of elimination the decision not to follow the regulations was clearly not a rulemaking, so must therefore be an adjudication. In addition, electing not to comply with regulations is in effect a "passive order," and an "order," as established above, constitutes an adjudication.

compliance with the NFMA--was a final agency action because it terminated the inter-agency decisionmaking process.[28] *See Sierra Club v. Glickman*, 974 F.Supp. at 914. As with any other type of adjudication, a disappointed party may sue for judicial review of an agency's final decision. Section 706 of the APA specifies the grounds for judicial review of any agency action, and Section 706(2)(F) provides for courts to determine facts independently by authorizing courts to overturn agency decisions if they are "unwarranted by the facts to the extent that the facts are subject to trial de novo by the reviewing court." 5 U.S.C. § 706(2)(F). While the early years of the APA witnessed many such trials where a full administrative hearing had not taken place, the Supreme Court's decision in *Citizens to Preserve Overton Park v. Volpe*, 401 U.S. 402, 91 S.Ct. 814, 28 L.Ed.2d 136 (1971), overruled on other ground by *Califano v. Sanders*, 430 U.S. 99, 105, 97 S.Ct. 980, 51 L.Ed.2d 192 (1977), drastically changed this practice.

Overton Park eliminated de novo review in all cases except those in which "the action is adjudicatory in nature and the agency factfinding procedures are inadequate" and "when issues that were not before the agency are raised in a proceeding to enforce nonadjudicatory agency action."[29] 401

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[28] Necessarily entwined with this conclusion is the district court's decision to conduct a factfinding to determine the extent of the Forest Service's noncompliance. Since the Forest Service had not seen fit to develop an administrative record offering explanations for its course to this final action, the district court was within its discretion to develop the record itself.

[29] In *Overton Park* itself, the Secretary of Transportation's decision to build an interstate through a city park was entitled to

U.S. at 415, 91 S.Ct. 814. As a result of *Overton Park*, however, de novo review of agency adjudications has virtually ceased to exist. In its stead, the "arbitrary and capricious" standard of review of 5 U.S.C. § 706(2)(A) is now applied to review of agency determinations in the adjudicatory setting. Interestingly, both sides to the instant dispute agree that this was the appropriate standard of review for the district court; Appellees contend that the court simply found the Forest Service's actions to be arbitrary and capricious, while Appellants believe, however, that the district court instead engaged in the disfavored de novo review.

Although *Overton Park* truncated the use of de novo review, it vastly expanded the range of arbitrary and capricious review under § 706(2)(A). Prior to *Overton Park*, no record or decision needed to be presented in order for a court to justify an agency's action; arbitrary and capricious review was essentially a carte blanche for agency action. *See, e.g., Pacific States Box & Basket Co. v. White*, 296 U.S. 176, 182, 56 S.Ct. 159, 80 L.Ed. 138 (1935) (finding no arbitrary and capricious action and intimating that such a finding should be the norm when reviewing agency action). *Overton Park* added teeth to arbitrary and capricious review: when applying arbitrary and capricious review to an agency decision, a court must "engage in a substantial inquiry ... a probing in-depth review . . . . " 401 U.S. at 415, 91 S.Ct. 814. The Court further observed that to "find arbitrariness, the court must consider whether the decision was based on a consideration of relevant factors and whether there has been a clear error of

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deference by the reviewing court, even though the Court implied that the agency's factfinding procedures were, in fact, inadequate.

judgment." *Id.* at 416, 91 S.Ct. 814. While "[t]he court is not empowered to substitute its judgment for that of the agency," it must engage in a "searching and careful" inquiry into the facts. *Id.* The district court did not conduct de novo review; in its opinion, the district court does not tell the agency what it "should have done" or substitute its judgment for that of the Forest Service. Rather, the purpose of the trial was to determine what the agency had done and why it had done it, both of which are acceptable under *Overton Park* and the APA.

Regardless of which standard of review the district court implemented--the typical "arbitrary and capricious" or the disfavored de novo-- it is beyond peradventure that the district court developed a record in this case, and the absence of a pre-existing record is typically fatal to the court's ability to review a matter. In the absence of a record, that is, in an informal adjudication such as the ones that are the subject of the instant case, the court may either take testimony from "the administrative officials who participated in the decision," *id.* at 420, 91 S.Ct. 814, or remand the case to give the agency a chance to prepare an explanation, rather than give testimony in open court, *see id.* The Court in *Overton Park* considered these two options and, while leaving the possibility of a trial open, expressed a preference for the remand, *see id.*, and subsequent decisions of the Supreme Court have clearly favored remand, *see*, *e.g.*, *Pension Benefit Guar. Corp. v. LTV Corp.*, 496 U.S. 633, 654, 110 S.Ct. 2668, 110 L.Ed.2d 579 (1990) (noting that remand to the agency is the "preferred course"); but *see Harris v. United States*, 19 F.3d 1090, 1096 n. 7 (5th Cir. 1994) (noting that, while extra-record investigations to determine the correctness or wisdom of

agency decisions are not allowed, having explanations from agency officials is acceptable).

In the instant case, the district court opted to conduct a trial to review the agency's informal adjudication with respect to its NFMA regulations rather than to remand the matter for further explanation. While many courts might have elected to remand the case to the agency for an explanation of its actions, the district court's decision to take testimony in the form of a trial was not an abuse of its discretion under current law and reflected exasperation with the Forest Service's repeated refusal to develop such a record despite ten years' worth of legal wrangling over this very issue and repeated requests that the Forest Service comply with its statutory duties.

At the conclusion of the trial, the court found the agency's action to be arbitrary and capricious, and, given the court's development of an administrative record--it caused 22 boxes of documents and exhibits to be produced--we cannot gainsay the district court's careful review of the facts and issues. Additionally, the memorandum opinion reflects a complete fleshing out this dispute. While we agree with Appellees that the district court simply developed a record by which to engage in arbitrary and capricious review, we will, for the sake of thoroughness, explore the alternative, and more complicated, argument that the district court actually engaged in a rare de novo trial typically eschewed under *Overton Park's* rubric.

Appellants' strongest argument is that the district court engaged in disfavored de novo review of agency action when it conducted a factfinding trial for the purpose of creating a record where none existed previously. In its opening brief, the Forest Service cites *Florida Power & Light Co. v. Lorion*, 470 U.S. 729, 105 S.Ct. 1598, 84 L.Ed.2d 643 (1985), for the proposition that the general course of conduct when a court is reviewing agency action is to make reference to "the administrative record already in existence, not some new record made initially in the reviewing court." *Id.* at 743, 105 S.Ct. 1598 (citation omitted). The Lorion Court further held that "except in rare circumstances," a court is not to conduct a de novo inquiry into an agency's action but is instead to remand the matter to the agency for further explanation. *Id.* at 744, 105 S.Ct. 1598. The Court offers no further guidance on what those "rare circumstances" might entail.

This procedure, the so-called "Record Rule," generally delineates the scope of the evidence upon which the merits of an administrative appeal will be resolved. A recent decision by the Second Circuit, however, in a case strikingly similar to the one at bar, supports the view that the Record Rule is not to be followed in all cases and that it should not be followed in this one. In *National Audubon Soc'y v. Hoffman*, 132 F.3d 7 (2nd Cir. 1997), the court held that

> [d]espite the general "record rule," an extra-record investigation by the reviewing court may be appropriate when there has been a strong showing in support of a claim of bad faith or improper behavior on the part of

> agency decisionmakers or where the absence of formal administrative findings makes such investigation necessary in order to determine the reasons for the agency's choice.

Id. at 14. The district court in the case before us was faced with an identical scenario: the Forest Service had made no findings with respect to its obligations under the statutes and regulations, despite repeated requests, and the district court was forced to do so itself.

National Audubon Society goes even farther. The court observed that "[d]eviation from this 'record rule' occurs with more frequency in the review of agency [National Environmental Policy Act of 1969 ('NEPA'), 42 U.S.C. §§ 4321-4347 (1995)] decisions than in the review of other agency decisions." *Id.*; see generally Susanne T. French, Comment, Judicial Review of the Administrative Record in NEPA Litigation, 81 CAL. L.REV. 929 (1993). The reason for this deviation is significant:

> This occurs because NEPA imposes a duty on federal agencies to compile a comprehensive analysis of the potential environmental impacts of its proposed action, and review of whether the agency's analysis has satisfied this duty often requires a court to look at evidence outside the administrative record. To limit the judicial inquiry regarding the completeness of the agency record to that record would, in some circumstances, make judicial review meaningless and eviscerate the very purposes of NEPA. The omission of technical scientific

> information is often not obvious from the record itself, and a court may therefore need a plaintiff's aid in calling such omissions to its attention. Thus, we have held that the consideration of extra-record evidence may be appropriate in the NEPA context to enable a reviewing court to determine that the information available to the decisionmaker included a complete discussion of environmental effects and alternatives.

National Audubon Society, 132 F.3d at 14-15 (citing *County of Suffolk v. Secretary of Interior*, 562 F.2d 1368, 1384 (2nd Cir. 1977)); *see also National Audubon Society v. Forest Service*, 46 F.3d 1437, 1447-48 (9th Cir. 1993) (applying this exception).

Significantly, this court has previously held that a district court may review evidence in addition to the administrative record to determine whether an agency adequately considered the environmental impact under NEPA of a particular project. *See Sabine River Authority v. Dept. of Interior*, 951 F.2d 669, 678 (5th Cir. 1992). We believe that an extension of this rule to the NFMA is both proper and prudent. That act also imposes a duty on the agency to follow certain complex scientific practices and to report on them. Appellants in the case before us, in an attempt to distinguish the statutes, argue that the NFMA is only procedural, not substantive, despite the fact that our decision in *Sierra Club I* suggested to the contrary. *See* 38 F.3d at 800-02. Since we hereby eliminate any confusion by concluding that the NFMA is a substantive statute imposing requirements on the Forest Service, *see infra* Part IV.A., it is but a small step to follow

our analysis in *Sabine River* and to determine that the district court did not err in its decision to engage in a factfinding trial.[30]

The application of *Sabine River* is especially appropriate since the agency's action was final; the decisionmaking process of the agency has been consummated and rights or obligations have been determined or legal consequences established. *See Bennett v. Spear*, 520 U.S. 154, 177-178, 117 S.Ct. 1154, 137 L.Ed.2d 281 (1997). The decision neither to engage on-the- ground in soil and watershed protection nor to inventory and to monitor biodiversity as the NFMA prescribes were consummated by the agency. Furthermore, the rights of the Timber Intervenors on the one hand and the environmental protection organizations on the other were each determined when the Forest Service failed to engage in on-the-ground implementation of the NFMA.

The Forest Service determined that it would conduct timber sales from trees growing in Texas's National Forests; it considered two alternative means of harvesting the trees--even-aged and uneven-aged timber management; it was aware

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[30] Notably, the dissent's poignant reliance on *Cronin v. Dept. of Agric.*, 919 F.2d 439 (7th Cir. 1990), while bolstering its claim that the district court's actions in this case were imprudent, is not entirely supportive of that position. Even the *Cronin* court acknowledged that the admission of evidence outside the administrative record should be allowed in order to challenge an environmental assessment where there is no record and no feasible method of compiling a record in time to protect the objector's rights. *See id.* at 444. Such, of course, is the case before this court. There is no record concerning the actions of the Forest Service that Appellees could have challenged.

of the regulations that required it to inventory and to monitor species that would be affected by even-aged timber management practices; it affirmatively decided not to follow those regulations; it engaged in even-aged management; it conducted timber sales subsequent to those practices. When the Forest Service elected not to follow those regulations, it undertook a final agency action for the purposes of the inventorying and monitoring that the regulations prescribed. Failure to follow those regulations is what the Appellees challenged. The district court recognized this fact, and, when confronted with the Forest Service's complete lack of record evidence explaining why it failed to follow the regulations, gave the Forest Service the opportunity to develop a record supporting its decision not to follow the regulations.[31]

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[31] Although the dissent agrees that "under certain circumstances, agency inaction may be sufficiently final to make judicial review appropriate," post at 378, it quickly strays from this reasoning with an inapposite quotation from another court. *See Public Citizen v. Nuclear Regulatory Comm'n*, 845 F.2d 1105, 1108 (D.C.Cir. 1988) (opining that "[p]etitioners just do not like what the Commission did"). We do not have before us a case of plaintiffs "dress[ing] up" an agency's action as a failure to act, *id.*; the Forest Service indisputably declined to consider the NFMA regulations when it made its decision. We know this to be the case because there was no administrative record indicating any discussion or determination of how the Service could comply with the regulations.

In the alternative, we note that, even if Appellees have "dressed up" the Forest Service's failure to act, i.e., even if the decision not to follow the regulations is best characterized as action rather than inaction, then the Service has undertaken a final action because there was no opportunity later to implement the regulations. The dissent's argument would thus fail under this construction of the language as well. Finally, the dissent's implied analogy of the Sierra Club to complainants in other cases who "do not like" what a particular agency did in a particular situation, is one without much force. Of course the Sierra Club does not "like"

Consequently, even if the district court did not engage in arbitrary and capricious review and instead conducted de novo review, we fred this occasion to be a "rare circumstance" endorsed by Lorion because no record whatsoever existed. Since the administrative record was entirely inadequate and prevented the reviewing court from effectively determining whether the agency considered all environmental consequences of this action, the district court's decision to conduct plenary review and to consider additional information obtained from the parties through testimony was entirely appropriate. *See National Audubon Society*, 132 F.3d at 15; *Sierra Club v. U.S. Army Corps of Engineers*, 772 F.2d 1043, 1051-52 (2nd Cir. 1985). This action was appropriate additionally because Appellees' challenge represented a specific challenge to a final agency action.

Further support for our finding a "rare circumstance" in this case is that, if we were to adopt the dissent's position, there would never be an opportunity to challenge a timber sale resulting from even-aged timber management. Challenging multiple sales at once does not meet the dissent's stringent

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what the Forest Service did; that does not mean that their challenge to the Service's decision not to follow the NFMA is without merit. While a party cannot challenge a" 'final disposition' already made," *Chemical Weapons Working Group, Inc. v. United States Dep't of the Army*, 111 F.3d 1485, 1494 (10th Cir. 1997), where the process for making that decision complied with relevant regulations and APA processes, it may certainly challenge the implementation of a decision where that decision, that final agency action, is arbitrary and capricious.

requirement for a contesting "particular" actions.[32] Post at 377. Sales already undertaken, while certainly representative of "final agency action," could not be challenged because such an undertaking would be foreclosed as moot. Post at 377 n. 2 (citing *Florida Wildlife Fed'n v. Goldschmidt*, 611 F.2d 547, 549 (5th Cir. 1980) for the proposition that an action is moot where a federal appellate court "cannot undo what has already been done"). Prohibiting any challenge to an agency's action was not the point or the thrust of *Lujan I*, yet it would appear to be the only solution that would please the dissent.

The dissent impliedly concedes as much in its discussion of the Sierra Club's failure to challenge the Forest Service's LRMP or individualized timber sales. Had Appellees only taken this route, the dissent implies, then they would have had standing under the APA. Yet the dissent's own rationale of the *Lujan I* standing doctrine undercuts this hypothesis: had Appellees challenged the LRMP, such an action would have no doubt been too generic (and not a final agency action); had they challenged the individualized timber sales, such an action would no doubt have been moot because it had already occurred. The dissent's lengthy discussion of Appellees' failure to identify a "final agency action" tends to camouflage the real issue in this case--the Forest Service took final action when it authorized timber sales stemming from

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[32] The dissent denies that its position possesses such polarity, post at 378, but its solution to this purported conundrum appears on its face to be exactly what Appellees did in this case: they "file[d] an action challenging the Forest Service's decision to proceed with . . . sale[s]," post at 378, approved as a result of the Forest Service's refusal to follow the NFMA and its attendant regulations.

even-aged management in direct contravention of the statutes and regulations that govern Forest Service action.

4

Our analysis in this case is persuasively supported by a recent opinion of a sister circuit. In *Sierra Club v. Martin*, 168 F.3d 1 (llth Cir. 1999), the Eleventh Circuit ruled on this exact issue. *See* 168 F.3d at 3-7. In *Martin*, the Forest Service argued that its decision to sell the timber rights to seven tracts of land within a Georgia National Forest was one committed to agency discretion. The sale would have allowed logging in the form of clearcutting, road building, and other related activities. *See id.* at 2. Over 155 tons of sediment would have been discharged into the Forest's rivers and streams as a result of these undertakings. *See id.* In theory complying with the NFMA, the Forest Service developed an LRMP and conducted a study of the projected impact of the sales, concluding that no adverse results would obtain. *See id.* at 2-3. The Sierra Club and other environmental groups argued, however, that the decision to proceed was arbitrary and capricious because the Forest Service had failed to inventory or to monitor endangered species of flora and fauna as required by the LRMP and the Forest Service's own regulations. *See id.* at 3. The district court held that the Forest Service was not required to obtain any population data before proceeding with the sales because the regulations at issue deal only with the formulation of LRMPs and not site-specific actions initiated under an LRMP.

The Eleventh Circuit reversed. In her opinion for the court, Judge Barkett ruled that (1) the NFMA and its attendant regulations do require actual on-the- ground population data

for inventorying and monitoring of species and that the Forest Service's failure to comply with those regulations was arbitrary and capricious. *See id.* at 5-6. In the case at bar, we are faced with an identical situation and, for the reasons explained supra, agree with the Eleventh Circuit that the NFMA requires on-the-ground inventorying and monitoring and is not simply a planning statute. The *Martin* court also held that the Sierra Club could challenge the Forest Service's compliance with a Forest Plan as part of its challenge to site-specific timber sales. *See id.* at 6. Indeed, the court observed that "[a] contrary result would effectively make it impossible for a plaintiff to even seek review of the Forest Service's compliance with a Forest Plan." *Id.* As noted above, we essentially adopt the same rationale for allowing Appellees to proceed in this case and to challenge the Forest Service's actions with respect to the Texas National Forests.[33]

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[33] The dissent's effort to distinguish *Martin* falters significantly. Reasoning that "the plaintiffs [in *Martin*] did not seek a judicial audit of the Forest Service's practice in Georgia' national forests, but challenged site-specific actions that corresponded to particular agency actions," post at 377, the dissent chastises Appellees here, who, they aver, failed to identify such an action on which to ground their claim. This softshoe approach hardly amounts to distinction. Indeed, instead of distinguishing the cases, the dissent merely argues that the cases are different without ever explaining how the challenges to particular sales in *Martin* differed from the challenges to particular sales in the case sub judice. As we have noted above, Appellees did point to specific actions, including the failure to apply the NFMA and its attendant regulations on the ground, *see infra* Part IV, that were final actions (or in some cases, inaction) by the Forest Service sufficient to confer jurisdiction on the district court.

IV
A

In *Sierra Club I*, we implied that the NFMA has a substantive component. *See Sierra Club* I, 38 F.3d at 800. We found that the approval of even-aged management techniques were within the discretion of the Forest Service. *See id.* This court reasoned that the Forest Service could take actions anywhere along the continuum between "preservation of the status quo" on one end and "eradication of species" on the other. Allowing even-aged management was just such a discretionary action. This discretion is not, however, "unbridled." *Id.* We also warned that "[t]he regulations implementing NFMA provide a minimum level of protection by mandating that the Forest Service manage fish and wildlife habitats to insure viable populations of species in planning areas." In addition, the statute requires the Forest Service to "provide for diversity of plant and animal communities." *Id.* (citations omitted). Consequently, this court has already determined that the NFMA and its associated regulations require the Forest Service to comply with the law on-the-ground rather than merely issuing standards and guidelines as part of its LRMPs.

For the Timber Intervenors to argue that the NFMA is a procedural statute only is disingenuous.[34] While this court did not specifically refer to the NFMA as a substantive statute in its *Sierra Club I* analysis, that panel readily admitted that

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[34] NEPA, 42 U.S.C. §§ 4321-4347, by contrast, is a procedural statute, mandating only that the Forest Service follow a particular process--the compilation of Environmental Impact Statements ("EIS"). *See Sierra Club I*, 38 F.3d at 796.

the NFMA has "substantive requirements" in its lengthy discussion of the requirements to which the Forest Service must adhere. *See Sierra Club I*, 38 F.3d at 800-02. The NFMA and its associated regulations require the Forest Service, inter alia, to "provide for diversity of plant and animal communities." *See* 16 U.S.C. § 1604(g)(3)(B).

B

Having determined that the taking of evidence was appropriate under the APA, the question whether the injunction was properly issued is still before us. The Forest Service implicitly recognizes that the real fight in this case is over whether the trial should have occurred in the first place. In its opening brief, the Forest Service devotes one sentence and no argument to its request that the injunction be vacated. The Timber Intervenors make a larger issue of the injunction's propriety, particularly urging that, since the Fifth Circuit has disallowed even-aged management injunctions in other cases, *see Sierra Club I*, 38 F.3d at 803; *Texas v. United States Forest Serv.*, 805 F.2d 524 (5th Cir. 1986) (per curiam); *Texas Comm. on Natural Resources v. Bergland*, 573 F.2d 201, 212 (5th Cir. 1978), it must vacate the injunction in the instant case.

The Timber Intervenors' cases do not truly support its position, however. In *Texas*, the Forest Service had neglected to file an EIS regarding a proposed clearcutting project, but we refused to allow a stay prohibiting the clearing because the project involved "pure management of the natural resource" under NEPA, a planning statute, and not the introduction of a "foreign" element into a natural environment. *Texas*, 805 F.2d at 527. While the instant case does not involve any

"foreign" elements either, the district court found that the Forest Service's actions violated a substantive statute, not the planning requirement forsaken by simply failing to file an EIS, and rose to the level of irreparable injury. In *Bergland*, this court also allowed the Forest Service to employ even-aged management techniques, but cautioned that such techniques may be used "only where [they are] essential to accomplish the relevant forest management objectives." *Bergland*, 573 F.2d at 210. There is no evidence in the briefs or in the lower court opinion establishing that even-aged techniques are "essential" to National Forest management in the instant matter.

Ultimately, *Sierra Club I* guides our decision in the instant case. In that case, this court ruled that even-aged management is one of several viable alternatives that the Forest Service may choose for timber management. *See Sierra Club I*, 38 F.3d at 800. Indeed, contrary to the district court's finding in that case, even-aged management is not the "exception to the rule of uneven-aged management;" the NFMA, this court found, does not express a preference for uneven-aged techniques, *see id.* at 799, and does not prohibit the use of even-aged timber management, *see id.*

The Timber Intervenors would have *Sierra Club I* stand for the proposition that any injunction against even-aged management is automatically invalid, since the *Sierra Club I* court deferred to the Forest Service's judgment in using even-aged management. They are, however, incorrect according to a careful reading of *Sierra Club I* and an examination of the district court's opinion in the instant case. In *Sierra Club I*, the court vacated the injunction at least in part because it determined that the Forest Service had complied with the

NFMA and its attendant regulations. *See id.* at 801-02. The Forest Service had compiled the appropriate statistics and taken into consideration the effects of even-aged management on the resources and biodiversity of the land that it proposed to clear-cut. *See id.* By contrast, the district court in this case found that the Forest Service had not complied with the NFMA and had not protected soil and watershed resources or inventoried and monitored other natural resources. *See Sierra Club v. Glickman*, 974 F.Supp. at 911. Consequently, the district court enjoined the timber harvesting activities only until such time as the Forest Service demonstrates compliance with the NFMA and its regulations "on-the-ground." *See id.* at 912. This action is clearly in step with *Sierra Club I* because it does not seek permanently to enjoin the use of even-aged management or to substitute the opinion of the court on the desirability of even-aged management for that of the agency. The opinion of the district court merely requires the Forest Service to comply with NFMA regulations before it proceeds with even-aged management in this particular part of the Texas National Forests.

The injunction is therefore proper. The district court, in an exhaustive opinion thoroughly grounded in scientific evidence, found that each of the requirements for obtaining an injunction had been met: likelihood of success on the merits, irreparable injury in the absence of the injunction, no substantial harm to the other party, and service of the public interest. *See id.* at 943-45. While each of these points is certainly debatable, the district court did not abuse its discretion in holding that Appellees had carried their burden. Indeed, the fact that both sides to the argument are cogent and potentially persuasive is proof that the injunction need not be vacated for abuse of discretion.

V

Having completed a "thorough, probing, in-depth review" of relevant precedent pertaining to this case, *Overton Park*, 401 U.S. at 415, 91 S.Ct. 814, we conclude that the district court's actions in the case before us were proper and, indeed, comport with the duties of a reviewing court as laid out by the Supreme Court's seminal decisions in this area. Consequently, we AFFIRM the judgment of the district court in all respects.

EMILIO M. GARZA, Circuit Judge, dissenting:

The plaintiffs in this case--the Sierra Club, the Wilderness Society, and the Texas Committee on Natural Resources (collectively "the Environmentalist Groups")--have not identified a "final agency action" subject to judicial review. Without a final agency action, the district court lacked jurisdiction to review the Environmentalist Groups' claims. Accordingly, I dissent.

I

In light of the majority's lengthy discussion of the history of forest management, and its extensive analysis of administrative and constitutional law, it is important to emphasize what this case is not about. This case is not about whether the Environmentalist Groups have Article III standing. This case has nothing to do with the well-pleaded complaint rule. And, despite the majority's characterization of this dissent, this case does not implicate the so-called "record rule."

It is also important to describe what the Environmentalist Groups' complaint alleges. The Environmentalist Groups have not challenged a site-specific timber sale. Nor have they challenged the Forest Service's Land Resource Management Plan ("LRMP"). Rather, they complain generally about the Forest Service's timber harvesting practices and the effects of these practices over the last twenty years. They specifically allege that, in violation of the National Forest Management Act ("NFMA") and its attendant regulations, the Forest Service has failed to protect key resources and to provide for diversity of plant and animal species in Texas's national forests.[1]

Given the posture of this case, we are faced with only one issue: Did the district court have jurisdiction to review the Environmentalist Groups' broad challenge to the Forest Service's management of Texas's national forests? It is on this issue that the majority and I disagree.

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[1] Before the district court, the Environmentalist Groups also alleged that the Forest Service failed to keep current and adequate inventories and monitoring data on key resources in Texas's national forests. The district court agreed with the Environmentalist Groups, concluding that the Forest Service had failed to meet its inventorying and monitoring obligations. The Forest Service has not appealed the district court's ruling on this issue. Accordingly, this issue is not properly before us on appeal. *See, e.g., Hawaii v. Standard Oil Co. of California*, 405 U.S. 251, 257 n. 6, 92 S.Ct. 885, 888 n. 6, 31 L.Ed.2d 184 (1972) ("Since the ruling was not appealed it is not before the Court for review.").

II

The NFMA does not provide for judicial review of Forest Service decisions, and therefore, the general review provisions of the Administrative Procedure Act ("APA") apply by default. *See* 5 U.S.C. § 704 ("Agency action made reviewable by statute and fmal agency action for which there is no other adequate remedy in a court are subject to judicial review."). The APA imposes limits on a district court's review of agency action. For example, if a plaintiff seeks review under the APA then the "agency action in question must be [a] 'final agency action.'" *Lujan v. National Wildlife Federation*, 497 U.S. 871, 882, 110 S.Ct. 3177, 3185, 111 L.Ed.2d 695 (1990). For an agency action to be "final," it "must mark the consummation of the agency's decisionmaking process," and "must be one by which rights or obligations have been determined, or from which legal consequences will flow." *Bennett v. Spear*, 520 U.S. 154, 177, 117 S.Ct. 1154, 1168, 137 L.Ed.2d 281 (1997) (citations and internal quotation marks omitted). "If there is no 'final agency action' . . . [then] a court lacks subject matter jurisdiction." *American Airlines, Inc. v. Herman*, 176 F.3d 283, 287 (5th Cir. 1999); *see also Wilderness Soc'y v. Alcock*, 83 F.3d 386, 388 n. 5 (11th Cir. 1996) (noting that courts have jurisdiction "over a challenge under the NFMA only if the agency action is final").

In *Lujan v. National Wildlife Federation*, 497 U.S. 871, 110 S.Ct. 3177, 111 L.Ed.2d 695 (1990), the Supreme Court elaborated on the limits to judicial review under the APA. The plaintiffs in *Lujan* averred that the Department of Interior's "land withdrawal program," which made over 160 million acres of federal land available for commercial use,

violated the Federal Land Policy Management Act and the National Environmental Policy Act. The Court upheld the district court's grant of summary judgment in favor of the defendants for two reasons. First, the Court held that the plaintiffs lacked standing because they had not alleged specific facts showing that they were actually affected or aggrieved by agency action. *See id.* at 882-90, 110 S.Ct. at 3185-90. Second, the Court held that the plaintiffs' claims were not entitled to judicial review because the challenged "land withdrawal program" was not "an identifiable action or event," and therefore, did not constitute a "final agency action" under the APA. *Id.* at 899, 110 S.Ct. at 3194.

In discussing the APA's finality requirement, the Court emphasized that because the plaintiffs had brought a "generic challenge" to all aspects of the "land withdrawal program," they had failed to direct their attack against a particular final agency action. *Id.* at 891, 110 S.Ct. at 3190. In reaching this conclusion, it admonished the lower courts to adhere to their traditional institutional role:

> Except where Congress explicitly provides for our correction of the administrative process at a higher level of generality, we intervene in the administration of the laws only when, and to the extent that, a specific "final agency action" has an actual or immediate threatened effect. Such an intervention may ultimately have the effect of requiring a regulation, a series of regulations, or even a whole "program" to be revised by the agency in order to avoid the unlawful result that the court discerns. But it is assuredly not as swift

> or as immediately far-reaching a corrective process as those interested in systemic improvements would desire. Until confided to us, however, more sweeping actions are for the other branches.

Id. at 894, 110 S.Ct. at 3191. Thus, the Court established a presumption in favor of case-by-case adjudication on the concrete facts of specific agency decisions, and against challenges seeking programmatic improvements to the administrative process as a whole. *See id.* at 890-94, 110 S.Ct. at 3189- 92.

A review of the pleadings in this case shows that the Environmentalist Groups have not directed their challenge against a particular final agency action. The Forest Service's alleged failure to implement timber sales in compliance with the NFMA neither constitutes "an identifiable action or event," *id.* at 899, 110 S.Ct. at 3194, nor "mark[s] the consummation of the agency's decisionmaking process," *Bennett*, 520 U.S. at 178, 117 S.Ct. at 1168. Instead, it reflects the cumulative effect of the many individual timber sales approved by the Forest Service since the NFMA became law in 1976. Logging pursuant to these past sales has occurred. Thus, having foregone a direct challenge to these

sales,[2] the Environmentalist Groups now seek a judicial audit of the effects of the Forest Service's timber management practices over the last twenty years. As *Lujan* makes clear, this generic challenge is not reviewable under the APA. *See Lujan*, 497 U.S. at 890-94, 110 S.Ct. at 3189-92.

The majority asserts that *Lujan's* reasoning does not preclude review of the Environmentalist Groups' complaint because the Environmentalist Groups have "alleged particularized injury and supported their allegations with voluminous evidence of individualized harm." According to the majority, the Environmentalist Groups have not made a generic challenge to Forest Service practices, but instead have "pointed to specific activities on specific plots in specific National Forests." The majority, however, conflates the standing requirements of Article III with *Lujan's* discussion of the APA's "final agency action" requirement. *See Bennett v. Spear*, 520 U.S. 154, 177, 117 S.Ct. 1154, 1168, 137 L.Ed.2d 281 (1997) (noting that "the question of whether the Secretary's action is final . . . [should not be confused with the] separate question of whether the petitioners' harm is 'fairly traceable' to the Secretary's action"); *Catron County Bd. of Comm'rs v. United States Fish and Wildlife Serv.*, 75 F.3d 1429, 1434 (10th Cir. 1996) ("In addition to Article III standing requirements, a plaintiff seeking review pursuant to

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[2] Any direct challenge to these timber sales would now be moot. *See Florida Wildlife Fed'n v. Goldschmidt*, 611 F.2d 547, 549 (5th Cir. 1980) ("Where the activities sought to be enjoined have already substantially occurred and the appellate court can not undo what has already been done, the action is moot.").

the APA must [ ] identify some final agency action . . . [that] form[s] the basis of its claims.").

Although the Environmentalist Groups may have Article III standing, we nonetheless must decide whether they have identified a final agency action for review or whether their challenge to the Forest Service's timber management practices is generic.[3] *See Catron*, 75 F.3d at 1434. Allegations of "particularized injury" and "voluminous evidence of individualized harm" are not dispositive as towhether jurisdiction exists to review the Environmental Groups' challenge. In *Lujan*, even though the plaintiffs referenced "many individual actions . . . in the[ir] complaint," "the flaws in the entire '[land withdrawal] program' . . . [could not] be laid before the courts for wholesale correction under the APA." *Lujan*, 497 U.S. at 893, 110 S.Ct. at 3190-91. Thus, as *Lujan* shows, to determine whether the

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[3] A plaintiff must meet three requirements to establish Article III standing:

First, the plaintiff must have suffered an "injury in fact"--an invasion of a legally protected interest which is (a) concrete and particularized, and (b) "actual or imminent, not 'conjectural' or 'hypothetical.'" Second, there must be a causal connection between the injury and the conduct complained of--the injury has to be "fairly . . . trace[able] to the challenged action of the defendant, and not . . . th[e] result [of] the independent action of some third party not before the court." Third, it must be "likely," as opposed to merely "speculative," that the injury will be "redressed by a favorable decision."

Lujan v. Defenders of Wildlife, 504 U.S. 555, 560-61, 112 S.Ct. 2130, 2136, 119 L.Ed.2d 351 (1992). A plaintiff, of course, may establish Article III standing without also satisfying statutorily imposed standing requirements. *See Steel Co. v. Citizens for a Better Environment*, 523 U.S. 83, ----, 118 S.Ct. 1003, 1013, 140 L.Ed.2d 210 (1998) (discussing both Article III and statutory standing).

Environmentalist Groups' challenge is generic, we should not focus on the evidence that they marshal in support of their challenge--the "many individual actions referenced in the[ir] complaint" are not relevant. *Id.* Instead, we must examine the "particular agency action" that the Environmentalist Groups have challenged. *Id.* at 891, 110 S.Ct. 3177, 110 S.Ct. at 3190. Again, a review of the pleadings shows that the Environmentalist Groups have not directed their attack against a final agency action.[4]

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[4] The majority concludes that the Forest Service's failure to maintain Texas's national forests constitutes an adjudication under the APA. It reasons that "by process of elimination the decision not to follow the regulations was clearly not a rulemaking, so must therefore be an adjudication." There are several difficulties with the majority's reasoning. First, as the majority admits, none of the parties argue that the Forest Service's alleged failure to comply with the NFMA and its regulations constitutes an adjudication. Second, the majority's logic presumes that a final agency action occurred. As discussed above, however, neither the majority nor the Environmentalist Groups have identified a concrete decision made by the Forest Service not to comply with its statutory or regulatory mandates. *See Bricklayers, Masons & Plasterers Int'l Union of Am. v. NLRB*, 475 F.2d 1316, 1319 (D.C.Cir. 1975) ("[A]djudication does not encompass all forms of agency action other than rulemaking. If the action in question does not lead to a 'final disposition' by the agency, it may not be an adjudication."). Third, the Forest Service's actions do not fit within any accepted definition of the term "adjudication." An adjudication "implies a hearing . . . after notice, of legal evidence on the factual issues involved." BLACK'S LAW DICTIONARY 42 (6th ed. 1990). It is "'individual in impact and condenmatory in purpose,' directed to the determination of the legal status of particular persons or practices through the application of preexisting legal standards." *FTC v. Brigadier Indus. Corp.*, 613 F.2d 1110, 1117 (D.C.Cir. 1979). Unlike a rulemaking, which involves the promulgation of policy-type rules or standards, an adjudication is a "proceeding designed to adjudicate disputed facts in particular cases." *United States v. Florida E. Coast Railway Co.*, 410 U.S. 224, 245, 93

Perhaps in recognition that the Environmentalist Groups have not identified a particular agency decision, the majority also concludes that the Forest Service's alleged failure to comply with the NFMA and its attendant regulations constitutes a "failure to act." I agree that under certain circumstances, agency inaction may be sufficiently final to make judicial review appropriate. *See Sierra Club v. Thomas*, 828 F.2d 783, 792-98 (D.C.Cir. 1987) (discussing different forms of agency inaction). The Forest Service's alleged failure to maintain Texas's national forests, however, does not reflect agency inaction. As Judge Williams explained in *Public Citizen v. Nuclear Regulatory Commission*:

> Whatever the hypothetical strength of petitioners' theory, it has no application here. The agency had acted. Its Policy Statement is a formal product of the Commission . . . . Petitioners just do not like what the Commission did.
>
> . . . .
>
> Our acceptance of petitioners' argument would make a nullity of statutory deadlines. Almost any objection to an agency action can be dressed up as an agency's failure to act. We can imagine situations where an agency's effort to comply was so flimsy or unpublicized that affected parties could not be expected to grasp that it was attempted compliance. But this is not such a case.

S.Ct. 810, 821, 35 L. Ed.2d 223 (1973).

845 F.2d 1105, 1108 (D.C.Cir.1988) (emphasis added). In this case, the Forest Service has not failed to issue a LRMP or to conduct timber sales. Moreover, the Environmentalist Groups have not argued that the Forest Service has not attempted to comply with the NFMA and its regulations. In short, the Forest Service has not failed to act.[5]

I disagree with the majority that preventing the Environmentalist Groups from challenging the general effects of the Forest Service's timber management practices would mean that there would never be an "opportunity to challenge a timber sale resulting from even-aged timber management." If the Environmentalist Groups believe that any particular proposed even-aged timber sale will result in NFMA and regulatory violations, then they may file an action challenging the Forest Service's decision to proceed with the sale. *See Ohio Forestry Ass'n, Inc. v. Sierra Club*, 523 U.S. 726, ----, 118 S.Ct. 1665, 1670, 140 L.Ed.2d 921 (1998) (holding a challenge to the lawfulness of the Forest Service's LRMP not justiciable) ("[B]efore the Forest Service can permit logging, it must focus upon a particular site, propose a specific harvesting method, prepare an environmental review, permit the public an opportunity to be heard, and (if challenged) justify the proposal in court."). Judicial review would then take place with the "benefit of the focus that a particular logging proposal could provide." *Id.* at 1672.

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[5] It is worth remembering that the plaintiffs in *Lujan* also alleged that the agency had violated its statutory mandates. *See Lujan*, 497 U.S. at 879, 110 S.Ct. at 3183-84. The Court in *Lujan*, however, did not conclude that the agency had failed to act.

The Eleventh Circuit's recent opinion in *Sierra Club v. Martin*, 168 F.3d 1 (11th Cir.1999), to which the majority cites, demonstrates how environmentalist groups may legitimately challenge the Forest Service's timber management practices. Contrary to the majority's assertion, that case is not "identical" to this one. In *Martin*, the Forest Service approved timber sales for seven tracts of land in the Chattahoochee and Oconee National Forests in Georgia. The plaintiffs filed suit, contending that the "timber cutting projects would harm plant and animal species in the Forest," and that the "proposed clearcutting" would not adequately protect the Forest's key resources. *Id.* at 3. Unlike the Environmentalist Groups in this case, the plaintiffs did not seek a judicial audit of the Forest Service's practices in Georgia's national forests, but challenged site-specific actions that corresponded to particular agency decisions.[6] Thus, unlike the Environmentalist Groups in this case, the plaintiffs in *Martin* identified a final agency action subject to judicial review.

I appreciate that requiring plaintiffs to bring challenges to individual timber sales before logging occurs places a higher burden on environmentalist groups wishing to monitor Forest Service management practices; however, as the Court noted in *Lujan*, judicial review of only final agency actions "is the traditional, and remains the normal, mode of operation of

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[6] As the majority notes, the Eleventh Circuit held that the plaintiffs could challenge the Forest Service's compliance with its LRMP as part of their challenge to site-specific timber sales. *See Martin*, 168 F.3d at 6. We do not need to consider whether the Eleventh Circuit's holding is correct because the Environmentalist Groups in this case have challenged neither a site-specific timber sale nor the Forest Service's LRMP.

the courts." *Lujan*, 497 U.S. at 894, 110 S.Ct. at 3191. Courts are not equipped to resolve the technical issues involved in agency decisionmaking at "a higher level of generality." *Id.*

As the Seventh Circuit has explained:

> Administrative agencies deal with technical questions, and it is imprudent for the generalist judges of federal district courts and the courts of appeals to consider testimonial and documentary evidence bearing on those questions unless the evidence has first been presented and considered by the agency. Trees may seem far removed from the arcana of administrative determination, but one has only to glance at the documents submitted in this case to realize that "silviculture" is in fact a technical field, and not just one with a dry and forbidding vocabulary.
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> *Cronin v. United States Dept. of Agric.*, 919 F.2d 439, 444 (7th Cir. 1990).

Wholesale improvement to the Forest Service's management of the national forests is best sought in the "offices of the [Department of Agriculture] or the halls of Congress, where programmatic improvements are normally made." *Lujan*, 497 U.S. at 891, 110 S.Ct. at 3190. Until confided to the courts, the "more sweeping actions" are reserved for the other branches of government. *Id.*

III

The district court lacked jurisdiction to review the Environmentalist Groups' broad challenge to the Forest Service's management of Texas's national forests. The majority's opinion ignores the important limits on judicial review that define the role of courts in our modern administrative state. In doing so, it undermines the purpose behind Congress's enactment of the NFMA-- that is, to "get the practice of forestry out of the courts and back to the forests." *See* 122 Cong. Rec. 33835 (Sept. 30, 1976) (remarks made during the adoption of the Conference Report by the NFMA's sponsor, Sen. Humphrey). Accordingly, I dissent.

APPENDIX C

UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS,
LUFKIN DIVISION

[Filed August 14, 1997]

No. 9:85-CV-69

SIERRA CLUB, ET AL.,
Plaintiffs,

v.

DANIEL GLICKMAN, SECRETARY OF AGRICULTURE, ET AL.,
Defendants,

and

TEXAS FORESTRY ASSOCIATION AND SOUTHERN TIMBER PURCHASERS COUNCIL,
Defendant-Intervenors.

MEMORANDUM OPINION, ORDER, AND INJUNCTION WITH SUPPORTING FINDINGS OF FACT AND CONCLUSIONS OF LAW ON THE

EVEN-AGED MANAGEMENT AND INVENTORYING-MONITORING ISSUES

Decided and Filed: August 14, 1997

SCHELL, Chief Judge.

The Sierra Club, Texas Committee on Natural Resources ("TCONR"), and The Wilderness Society (collectively "Plaintiffs") brought this action challenging the United States Forest Service's management of the National Forests in Texas. The Texas Forestry Association and Southern Timber Purchasers Council (collectively "Timber Intervenors") have intervened. The broad issue before the court is whether the Forest Service is complying with the National Forest Management Act ("NFMA"), 16 U.S.C. §§ 1600-14 and related regulations, 36 C.F.R. § 219.1-29 (hereinafter "NFMA regulations" or "regulations"). The NFMA and regulations generally require: (1) diversity of plant and animal communities as well as tree species, (2) protection of key resources, and (3) inventorying and monitoring for key resources, diversity, and effects of management activities. Considering the evidence adduced at trial, legal argument of counsel, and the parties' respective proposed findings of fact and conclusions of law, the court is of the opinion that the Forest Service has stepped outside its discretion and acted arbitrarily and capriciously with respect to (1) protecting the key resources of soil and watershed and (2) inventorying and monitoring the wildlife resource, forest diversity, and whether the Forest Service is meeting its objectives and adhering to standards and guidelines with respect to wildlife.

With respect to the soil resource, the evidence shows that the Forest Service's management activities are causing severe soil erosion and loss of essential organic matter. This loss of soil and organic matter substantially and permanently affects the productivity of the land. Without rich forest soil, plant and animal communities suffer as well as the forest land's ability to produce healthy timber stands. With respect to the watershed resource, Forest Service management practices are causing substantial and permanent (1) erosion within waterways, (2) deposit of soil, silt, and sedimentation in waterways, and (3) disruption of water run-off. Additionally, the Forest Services's practice of permitting timber harvesting in streamside management zones exacerbates the erosion and sedimentation problems and causes the deposit of logging debris in streams. This derogation of the streams (1) destroys plant, animal, and fish habitat and (2) contributes to flooding.

With respect to the Forest Service's inventorying and monitoring obligations, the Forest Service is not collecting population data on wildlife to ensure viable populations. The Forest Service instead is relying on hypothetical models to assess habitat capability and then assuming that viable populations of species are in existence and well-distributed on the forest land. The Forest Service's failure to collect population data forecloses its ability to evaluate forest diversity in terms of wildlife and to adequately determine the effects of its management activities. The Forest Service's failure to adequately inventory and monitor may be causing permanent and substantial damage to the productivity of the land. Sufficient inventorying and monitoring of forest resources is vital to making sound, forest-management decisions and ultimately protecting the forest resources from

permanent impairment. In light of the Federal Defendants' noncompliance with the NFMA and regulations, the court will enjoin certain timber harvesting activities until the Forest Service demonstrates compliance "on-the-ground."

BACKGROUND

This case has spanned over a decade and involved many complex issues.[1] In this stage of the case, Plaintiffs allege that the Forest Service is violating the NFMA and regulations. The court articulated the issues for trial in a prior order:

> (1) Whether the Forest Service has, in practice, as required by the regulations, kept current and adequate inventories and monitoring data for key resources in the national forests in Texas; (2) Whether the Forest Service has, in practice, as required by the regulations, protected key resources in its application of even-aged management techniques; and (3) Whether the Forest Service has, in practice, as required by the regulations,

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[1] The procedural history of this case is contained in prior opinions. *See Sierra Club v. Glickman*, 67 F.3d 90, 92-93 (5th Cir. 1995) (Red-Cockaded Woodpecker); *Sierra Club v. Espy*, 38 F.3d 792 (5th Cir. 1994) (even-aged logging); *Sierra Club v. Lyng*, 694 F. Supp. 1260, 1263-64, 1273-75 (E.D. Tex. 1988) (Southern Pine Beetle), *aff'd in part and vacated in part sub. nom. Sierra Club v. Yeutter*, 926 F.2d 429 (5th Cir. 1991) (addressing Red-Cockaded Woodpecker issues). This court declined to revisit the Southern Pine Beetle issue. Court's Order of Sept. 9, 1994.

> provided for diversity of plant and animal communities in its application of even-aged management techniques.
>
> Court's Order of Aug. 21, 1995.

Plaintiffs previously challenged the Forest Service's even-aged management practices.[2] After the Chief of the

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[2] A prior opinion in this case explains the timber harvesting methods:

> Broadly stated, there are two ways to manage a forest's timber resources. The first method is even-aged management. *See* 36 C.F.R. § 219.3. Even-aged management includes clearcutting, where all the trees are cut down; seed tree cutting, where most of the trees are cut down, leaving only a few to naturally seed the cut area; and shelterwood cutting, where about double the number of trees are left standing as would be under the seed tree method. Even under the least intrusive even-aged management technique, shelterwood cutting, only about sixteen trees per acre remain after a cut. Moreover, under seed tree cutting, the older trees left to naturally seed the cut area are later removed. Even-aged management results in stands of trees that are essentially the same age. . . . The second method of timber resource management is uneven-aged management, also known as selection management. *See* 36 C.F.R. § 219.3. Uneven-aged management encompasses both single tree selection and group selection. Group selection involves cutting small patches of trees, while single tree selection involves selecting particular trees for cutting. Uneven-aged management maintains a continuous high-forest cover, and the stands are characterized by a number of differently aged trees.

Forest Service "shut-down" TCONR's administrative appeal, TCONR and the other Plaintiffs here sought (1) a declaration that the Forest Service's even-aged management practices did not comply with the National Environmental Policy Act ("NEPA"),[3] 42 U.S.C. § 4321, *et seq.* and the NFMA, and (2) an injunction against all even-aged management practices. *Sierra Club v. Espy,* 822 F. Supp. 356, 358 (E.D. Tex. 1993). Unlike the "on-the-ground" challenge now before the court, Plaintiffs argued that the Forest Service's planning documents[4] "on-their-face" violated NEPA and the NFMA. *Id.* at 359. The Honorable Robert M. Parker, then Chief Judge of the Eastern District of Texas, determined that the Forest Service was violating NEPA and the NFMA. *Id.* at 366-68. Specifically, in its planning documents, the Forest Service failed to consider important information and various cutting options. *Id.* The court reasoned that Plaintiffs were likely to succeed on their NEPA claims because the Forest Service had "'swept' some significant environmental considerations and criticisms of its scheduled even-aged management actions 'under the rug,' or failed to give good faith, meaningful consideration to foreseeable, statutorily important, environmental consequences of its planned even-aged logging activities." *Id.* at 368. The court also reasoned

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Sierra Club v. Espy, 38 F.3d at 795-96.

[3] NEPA requires federal agencies to prepare a detailed Environmental Impact Statement for inclusion in major federal actions significantly affecting the quality of the human environment. 42 U.S.C. § 4332(C). NEPA is incorporated into the NFMA by 16 U.S.C. § 1604(g)(1).

[4] For a detailed discussion of these planning documents, *see Sierra Club v. Espy,* 38 F.3d at 795-96.

that Plaintiffs were likely to succeed on their NTMA claims because the Forest Service used even-aged management as the "rule" when, in fact, the NFMA "contemplates that even-aged management techniques will be used only in exceptional circumstances." *Id.* at 363-64.

The Court of Appeals for the Fifth Circuit reversed the district court's decision. *Sierra Club v. Espy,* 38 F.3d at 795. The Fifth Circuit disagreed with the district court's interpretation that the NFMA provides that even-aged management is an exception to a rule of uneven-aged management.[5] *Id.* at 799. The Fifth Circuit stated:

> That even-aged management must be the optimum or appropriate method to accomplish the objectives and requirements set forth in a [Land Resource Management Plan] does not mean that even-aged management is the exception to a rule that purportedly favors selection management. Similarly, the requirement that even-aged logging protect forest resources does not in itself limit its use.

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[5] Creating a split between the circuits, the Sixth Circuit has determined that "[t]he National Forest Management Act thus contemplates that even-aged management techniques will be used only in exceptional circumstances." *Sierra Club v. Thomas,* 105 F.3d 248, 251 (6th Cir. 1997). Reviewing a Land Resource Management Plan ("LRMP") that required that eighty percent of all logging would be even-aged, the Sixth Circuit determined that the Forest Service violated section 1604(g)(3)(F)(v) of the NFMA by failing to protect key resources. *Id.* at 249, 252. The Sixth Circuit explained political and economic factors that cause the loss of key resources in the National Forests despite the statutory requirements of the NFMA. *Id.* 251-52.

> Rather, these provisions [in the NFMA] mean that the Forest Service must proceed cautiously in implementing an even-aged management alternative and only after a close examination of the effects that such management will have on other forest resources.

Sierra Club v. Espy, 38 F.3d at 799. In making this determination, the Fifth Circuit relied on *Texas Comm. on Natural Resources v. Bergland*, 573 F.2d 201 (5th Cir. 1978) ("*Bergland*"). Following its reasoning in *Bergland*, the Fifth Circuit explained:

> Congress, after hearing testimony on both sides of the clearcutting issue, struck a delicate balance between the benefits of clearcutting and the benefits of preserving the ecosystems and scenic quality of natural forests. Specifically, NFMA was an effort to place the initial technical, management responsibility for the application of NFMA guidelines on the responsible government agency, in this case the Forest Service. The NFMA is a set of outer boundaries within which the Forest Service must work. We then cautioned the Forest Service that clearcutting could not be justified merely on the basis that it provided the greatest dollar return per unit output; rather, clearcutting must be used only where it is essential to accomplish the relevant forest management objectives.

Sierra Club v. Espy, 38 F.3d at 798-99 (internal citations and quotation marks omitted).

The Fifth Circuit then determined that the Forest Service's timber-sale planning documents, *i.e.*, the Environmental Assessments, complied with the NFMA. Interpreting the NFMA and regulations, the Fifth Circuit stated:

> The directive that national forests are subject to multiple uses, including timber uses, suggests that the mix of forest resources will change according to a given use. Maintenance of a pristine environment where no species' numbers are threatened runs counter to the notion that NFMA contemplates both even- and uneven-aged timber management. Indeed, NFMA regulations anticipate the possibility of change and provide that "reductions in diversity of plant and animal communities and tree species from that which would be expected in a natural forest, or from that similar to the existing diversity in the planning area, may be prescribed only where needed to meet overall multiple-use objectives." 36 C.F.R. § 219.27(g); *see also* 16 U.S.C. § 1604(g)(3)(C) (LRMP must ensure research and evaluation of effects of each management system to assure no "*substantial and permanent* impairment" of land productivity) (emphasis added); 16 U.S.C. § 1604(g)(3)(E)(i) (LRMP must provide that timber be harvested only where "soil, slope, or

> other watershed conditions will not be *irreversibly* damaged") (emphasis added). That protection means something less than preservation of the status quo but something more than eradication of species suggests that this is just the type of policy-oriented decision Congress wisely left to the discretion of the experts--here, the Forest Service.

Id. at 800. The Fifth Circuit, however, warned:

> The Forest Service's discretion, however, is not unbridled. The regulations implementing NFMA provide a minimum level of protection by mandating that the Forest Service manage fish and wildlife habitats to insure viable populations of species in planning areas. 36 C.F.R. § 219.19. In addition, the statute requires the Forest Service to "provide for diversity of plant and animal communities." 16 U.S.C. § 1604(g)(3)(B).

Id. at 800-01. The Fifth Circuit interpreted the NFMA and regulations to actually require the Forest Service to comply with the law on-the-ground rather than merely including precatory standards and guidelines in its planning documents.

JURISDICTION

The court has jurisdiction over this action. "A person suffering legal wrong because of agency action, or adversely affected or aggrieved by agency action within the meaning of

a relevant statute, is entitled to judicial review thereof." Administrative Procedure Act ("APA"), 5 U.S.C. § 702. "Agency action made reviewable by statute and final agency action for which there is no other adequate remedy in a court are subject to judicial review." 5 U.S.C. § 704. "'[A]gency action' includes the whole or a part of an agency rule, order, license, sanction, relief, or the equivalent or denial thereof, or *failure to act* . . . ." 5 U.S.C. § § 551(13), 701(b)(2) (emphasis added). "When an aggrieved party has exhausted all administrative remedies expressly prescribed by statute or agency rule, the agency action is final for the purposes of [section 704] and therefore subject to judicial review. . . ." *Darby v. Cisneros,* 509 U.S. 137, 146, 113 S. Ct. 2539, 2544, 125 L. Ed. 2d 113 (1993) (internal quotation marks omitted). "While federal courts may be free to apply, where appropriate, other prudential doctrines of judicial administration to limit the scope and timing of judicial review, [section 704], by its very terms, has limited the availability of the doctrine of exhaustion of administrative remedies to that which the statute or rule clearly mandates." *Id.*

Under the APA, this court has jurisdiction to review the Forest Service's failure to act with respect to alleged on-the-ground violations of the NFMA and regulations. NFMA regulations provide for administrative review of a Forest Service determination to make a specific sale of timber. 36 C.F.R. § 215.7. But no statute or regulation provides for an administrative review of agency actions after the sale with respect to implementing a LRMP in accordance with the NFMA. While an initial decision to offer a timber sale is

appealable, subsequent implementing actions are not.[6] 36 C.F.R. § 215.8(b).

The Forest Service's failure to implement timber sales in compliance with the NFMA and regulations, as alleged by Plaintiffs, is a final agency action for purposes of section 704. Once the Forest Service adopted a final, definite course of action or inaction with respect to the management of the forest lands (regardless of whether that action or inaction is memorialized in a written agency decision), the court has a "final agency action" to review. A contrary view, held by the Federal Defendants and Timber Intervenors, would put all of the Forest Service's on-the-ground violations of the NFMA and regulations beyond judicial review. Under this view, the Forest Service seeks absolute immunity from its on-the-ground management activities. Awaiting future Forest Service timber-sale or planning decisions would not assist the court in determining whether the Forest Service is complying with the law on-the-ground. For example, neither the 1996 Land Resource and Management Plan ("1996 LRMP")[7] nor any

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[6] Defendants agree that no statute or regulation provides for an administrative review of agency actions after the sale, and that exhaustion of administrative remedies does not apply to an on-the-ground review. *See* Federal Defs.' Br. on Exhaustion of Administrative Remedies at 4, 6-7; Timber Intervenors' Br. on Exhaustion of Administrative Remedies at 4 n.2.

[7] The Forest Service unveiled a new LRMP on March 28, 1996. *See* Gov't Ex. 243A, Revised Land and Resource Management Plan dated 1996 ("1996 LRMP"). The NFMA provides that forest plans should be revised or replaced at least every fifteen years. 16 U.S.C. § 1604(f)(5). Once a revised forest plan is issued, new timber "contracts, and other instruments for the use and occupancy of National Forest System lands shall be consistent with" the revised plan. 16 U.S.C. § 1604(i).

future timber sales under that Plan would put this court in a better position to determine whether the Forest Service has complied with the NFMA and regulations with respect to implementation of past timber sales.

Defendants argue that the issues before the court are moot because of the adoption of the 1996 LRMP that supersedes the 1987 LRMP. Federal Defs.' Proposed Findings of Fact and Conclusions of Law at 108-09; Timber Intervenors' Closing Argument on the NFMA Issues at 2-4. They also argue that the 1996 LRMP will govern all future timber sales and monitoring activities. A federal district court's jurisdiction depends on a justiciable controversy under the constitutional case-or-controversy requirement. *See* U.S. CONST. art. III, § 2, cl. 1. A justiciable controversy is one that is not moot. "The mootness doctrine requires that the controversy posed by the plaintiff's complaint be 'live' not only at the time the plaintiff files the complaint but also throughout the litigation process." [8] *Rocky v. King*, 900 F.2d

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[8] There are three broad exceptions to the mootness doctrine: collateral consequences, wrong capable of repetition yet evading review, and voluntary cessation. *See* ERWIN CHEMERINSKY, FEDERAL JURISDICTION 128-39 (2d ed. 1994). Under the "collateral consequences" exception, a case is not moot if an injury remains that could be redressed by a favorable court decision. *Id.* at 128. Under the "wrong capable of repetition yet evading review" exception, a case is not moot if the challenged action was too short in duration to be fully litigated while in existence and if there is a reasonable expectation that the plaintiff will again be subject to the same action in the future. *Id.* at 131-32. Under the "voluntary cessation" exception, a case is not moot if there is a reasonable expectation that the plaintiff again will be subject to the unlawful conduct. *Id.* at 136. Even assuming that the issues before the court are not "live" (which they are), the court would continue to have jurisdiction because the Forest Service

864, 866 (5th Cir. 1990). A live controversy must have an injury traceable to the actions of the defendants and susceptible to some judicial remedy. *Baccus v. Parrish,* 45 F.3d 958, 961 (5th Cir. 1995).

This action is not moot. Plaintiffs, as alleged, continue to suffer from the Forest Service's alleged past and ongoing violations of the NFMA and regulations. Plaintiffs allege that the Forest Service's even-aged logging activities, regardless of whether they are under the old or new LRMP, violate the NFMA and regulations with respect to implementation of past timber sales. If violations are ultimately determined to have been occurring, adoption of the 1996 LRMP does not guarantee that the Forest Service will comply on-the-ground with the NFMA and regulations. If continuing violations are found, the court can fashion a judicial remedy.

STANDARDS OF REVIEW

Section 706 of the APA establishes the scope of review for this action. Section 706 provides:

> To the extent necessary to decision and when presented, the reviewing court shall decide all relevant questions of law, interpret constitutional and statutory provisions, and determine the meaning or applicability of the

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could continuously amend its 1996 LRMP to evade review. Furthermore, a Forest Service planning document or subsequent amendment may not necessarily ensure on-the-ground compliance with the NFMA and regulations.

> terms of an agency action. The reviewing court shall--
> (1) compel agency action unlawfully withheld or unreasonably delayed; and
> (2) hold unlawful and set aside agency action, findings, and conclusions found to be--
> (A) arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law . . . .

5 U.S.C. § 706. The arbitrary and capricious standard of section 706 applies in determining whether the Forest Service has complied with the NFMA and regulations. *Sierra Club v. Espy,* 38 F.3d at 798. Under the APA's arbitrary and capricious standard, "administrative action is upheld if the agency has considered the relevant factors and articulated a rational connection between the facts found and the choice made." *Sierra Club v. Glickman,* 67 F.3d at 97. In other words, to make a finding that the Forest Service's actions were arbitrary and capricious, "the court must consider whether the decision was based on a consideration of the relevant factors and whether there has been a clear error of judgment." *Citizens to Preserve Overton Park, Inc. v. Volpe,* 401 U.S. 402, 416, 28 L. Ed. 2d 136, 91 S. Ct. 814 (1971). "Although this inquiry into the facts is to be searching and careful, the ultimate standard of review is a narrow one. The court is not empowered to substitute its judgment for that of the agency." *Id.*

In determining statutory compliance with the NFMA, the court must conduct a careful review:

> [T]he starting point in every case involving construction of a statute is the language itself. We must give effect to the unambiguously stated intention of Congress. In determining the meaning of the statute, we look not only to the particular statutory language, but to the design of the statute as a whole and to its object and policy. However, an agency's construction of an ambiguous statute it administers will be upheld so long as that construction is reasonable.

Sierra Club v. Espy, 38 F.3d at 798 (internal quotation marks and citations omitted). In determining whether the Forest Service complied with its own regulations, a court must give even greater deference to the Forest Service's interpretation. The Forest Service's interpretation of its own regulations will control if that interpretation is not "'plainly erroneous or inconsistent with the regulations.'" *Robertson v. Methow Valley Citizens Council,* 490 U.S. 332, 359, 104 L. Ed. 2d 351, 109 S. Ct. 1835 (1989) (quoting *Bowles v. Seminole Rock & Sand Co.,* 325 U.S. 410, 414, 65 S. Ct. 1215, 1217, 89 L. Ed. 1700 (1945)). Absent proof of arbitrary and capricious action, courts must assume that the agency has exercised its discretion appropriately. *Kleppe v. Sierra Club,* 427 U.S. 390, 412, 96 S. Ct. 2718, 2731, 49 L. Ed. 2d 576 (1976). The party challenging the agency action bears the burden of proof. *Sierra Club v. Marita,* 46 F.3d 606, 619 (7th Cir. 1995).

Federal officials or an agency are presumed to carry out their duties in compliance with the law. *Diaz-Soto v. I.N.S.,* 797 F.2d 262, 264 (5th Cir. 1986) (citing *Citizens to*

Preserve Overton Park, 401 U.S. at 415, 91 S.Ct. at 823). "But that presumption is not to shield [agency] action from a thorough, probing, in-depth review." *Citizens to Preserve Overton Park,* 401 U.S. at 415, 91 S.Ct. at 823. Under this standard, the court must determine whether the agency's actions are within the substantive "outer boundaries" or limitations of the NFMA. *See, e.g., Bergland,* 573 F.2d at 210. "The NFMA is a set of outer boundaries within which the Forest Service must work. Within its parameters, the management decision belongs to the agency and should not be second-guessed by a court." *Id.*

In reviewing Forest Service management activities that require a high level of technical experience, a court must defer to the informed discretion of the Forest Service. *See Marsh v. Oregon Natural Resources Council,* 490 U.S. 360, 377, 109 S. Ct. 1851, 1861, 104 L. Ed. 2d 377 (1989) (citing *Kleppe v. Sierra Club,* 427 U.S. at 412, 96 S.Ct. at 2731). "When specialists express conflicting views, an agency must have discretion to rely on the reasonable opinions of its own qualified experts even if, as an original matter, a court might find contrary views more persuasive." *Marsh,* 490 U.S. at 378, 109 S.Ct. at 1861. A court, however, must hold the Forest Service to "certain minimal standards of rationality." *Louisiana ex rel. Guste v. Verity,* 853 F.2d 322, 329 (5th Cir. 1988) (internal citations and quotation marks omitted). Forest Service decisions, even within its area of expertise, must be based on a reasoned evaluation of relevant factors. *See Marsh,* 490 U.S. at 378, 109 S.Ct. at 1861-62.

Timber Intervenors argue that the NFMA and regulations do not provide sufficient legal standards for a court to determine whether the Forest Service is complying

with the law on-the-ground. Timber Intervenors state: "The NFMA and most of the regulations provide no law to apply to [Plaintiffs'] claims of on-the-ground violations." Timber Intervenors' Closing Argument on the NFMA Issues at 8. Timber Intervenors further argue that the NFMA and regulations merely require the Forest Service to plan management activities rather than actually carry them out on-the-ground. Timber Intervenors argue: "The NFMA and the 36 C.F.R. Part 219 regulations do *not* create standards which apply to on-the-ground effects of even-aged management." *Id.* at 6 (emphasis in original). Under the Timber Intervenors' interpretations of the NFMA and regulations, no federal court could review the Forest Service's management of the National Forests and determine whether the Forest Service is complying with the law on-the-ground. Under their interpretation, review would be limited to the facial content of the planning documents rather than actual, on-the-ground management activities. In essence, Timber Intervenors are proposing immunity for the Forest Service's actions on-the-ground.

While acknowledging the Forest Service's discretion in managing the forests, the Fifth Circuit, however, has rejected the Timber Intervenors' interpretation of the NFMA and regulations:

> The Forest Service's discretion, however, is not unbridled. The regulations implementing NFMA provide a minimum level of protection by mandating that the Forest Service manage fish and wildlife habitats to insure viable populations of species in planning areas. 36 C.F.R. § 219.19. In addition, the statute

> requires the Forest Service to "provide for diversity of plant and animal communities." 16 U.S.C. § 1604(g)(3)(B).

Sierra Club v. Espy, 38 F.3d at 800-01. Here, as noted previously, the Fifth Circuit is interpreting the NFMA and regulations to require the Forest Service to comply with the law on-the-ground rather than merely including precatory standards and guidelines in its planning documents. Moreover, while section 1604(g) of the NFMA requires the Secretary of Agriculture to promulgate regulations for Forest Service planning, this section also mandates that the regulations set out guidelines for land management that actually achieve the goals set out for the Forest Service. *See, e.g.*, 16 U.S.C. § 1604(g)(3). "The NFMA and its implementing regulations require[] the Forest Service to follow a range of legal standards in developing local forest plans *and to manage the national forests in accordance with the plans*." CHARLES F. WILKINSON & H. MICHAEL ANDERSON, LAND AND RESOURCE PLANNING IN THE NATIONAL FORESTS 45 (1987) (emphasis added). "The NFMA . . . require[s] courts to scrutinize forest plans, and activities based on those plans, on both procedural and substantive grounds." *Id.* at 74. Therefore, based on the foregoing interpretations of the NFMA and regulations, there are sufficient Tegal standards available to review the Forest Service's actions. And, its actions are not wholly "committed to agency discretion by law" under section 701(a)(2) of the APA. *See, e.g., Webster v. Doe*, 486 U.S. 592, 599, 108 S. Ct. 2047, 2051-52, 100 L. Ed. 2d 632 (1988) (noting that 701(a)(2) "applies in those rare instances where statutes are drawn in such broad terms that in a given case there is no law to apply") (internal citations and quotation marks omitted).

BACKGROUND FINDINGS

Throughout this opinion, all findings of fact that could be construed as conclusions of law are to be construed as such, and all conclusions of law that could be construed as findings of fact are to be construed as such. Findings of fact in any one section of this opinion are hereby incorporated into every other section. All findings of fact are to be construed as being made in the past and present verb tense. The citations to the trial record that follow some of the findings of fact are for the reviewing court's convenience and not necessarily inclusive of all the evidentiary support for the court's findings. Citations to the trial-record transcript are indicated by "R. page/line(s)."

1. The National Forests and Grasslands in Texas are comprised of four separate forests and two grasslands. The total acreage for the National Forests and Grasslands is approximately 675,000 acres. R. 792/10-12; Gov't Ex. 15, Final Land Resource Management Plan dated April 1987 ("1987 LRMP"), at I-3.

2. The National Forests cover approximately 639,000 acres and are the Sam Houston, Davy Crockett, Angelina, and Sabine. R. 728/23 to 729/10, 776/12-20. There is no commercial timber harvesting on the grasslands, and therefore, the management of the grasslands is not at issue in this action. Gov't Ex. 15, 1987 LRMP, at IV-69. Findings of fact and conclusions of law in this opinion regarding acreage, volume, and percentages are limited to the four National Forests.

3. As of 1991: the Sam Houston National Forest contained approximately 161,000 acres; the Davy Crockett National Forest contained approximately 162,000 acres; the Angelina National Forest contained approximately 153,000 acres; and the Sabine National Forest contained approximately 160,600 acres. Gov't Ex. 19, Five Year Review/AMS dated March 1992 ("1992 Five Year Review"), at 16-3 to 16-4. Each National Forest has a proclamation boundary and within that boundary lies the actual United States Forest Service ownership. R. 751/24 to 752/4; Gov't Ex. 19, 1992 Five Year Review, at 16-3 to 16-4. The Forest Service owns 37% of the lands within the proclamation boundaries. *Id.*; Gov't Ex. 16, Draft Environmental Impact Statement dated September 1994 ("1994 DEIS"), at 124.

4. A map of the National Forests in Texas reveals a fragmented landscape that is the result of private holdings separating large segments of the forest and inholdings fragmenting even those more cohesive segments. Gov't Ex. 176.

5. The land for the forests was purchased in the late 1930s and early 1940s pursuant to the Weeks Act of 1911, as amended, and by authorization from the Texas Legislature. Gov't Ex. 15, 1987 LRMP, at I-3; Gov't Ex. 19, 1992 Five Year Review, at 12-126.

6. The approximate 639,000 acres of the four National Forests are divided into compartments, which are administrative units to allow for more efficient management and record keeping. R. 873/13-19. Each compartment is divided into stands. R. 93/12-13.

7. The Forest Service deems approximately 521,018 acres to be suitable for timber production. Gov't Ex. 15, 1987 LRMP, at IV-11.

8. Although each stand and compartment is different the activities occurring on Compartment 98 of the Sam Houston National Forest are generally typical of even-aged regeneration activities across the National Forests in Texas. R. 1258/20-23. Even-aged practices on one part of the planning area are generally similar to even-aged practices in other areas. R. 649/21 to 650/21.

PROVIDING FOR DIVERSITY

Findings of Fact

1. The Forest Service in Texas began practicing even-aged management techniques in the early 1960s. Gov't Ex. 19, 1992 Five Year Review, at 12-128.

2. The even-aged system was the predominant management system used to regenerate timber under the 1987 LRMP. R. 764/9-11. The 1987 LRMP specified that approximately 60% of the pine acreage in the suitable land classification would be regenerated by clearcut and that 40% of the regeneration would be by the other even-aged methods of seedtree or shelterwood. Gov't Ex. 15, 1987 LRMP, at IV-15.

3. Pursuant to the Chief of the Forest Service's decision on remand of Plaintiffs' appeal of the 1987 LRMP, the determination of whether to utilize even-aged management in a timber sale is now made at the project level. *Sierra Club*

v. Espy, 822 F. Supp. at 359 n.5 (discussing the 1989 decision); Gov't Ex. 243A, 1996 LRMP, at 9.

4. Even-aged management diminishes many of the plant and animal species native to the National Forests in Texas, and some plant and animal species may be irretrievably lost. R. 123/16 to 124/7, 254/9 to 261/3, 268/13 to 274/13, 456/4-24, 462/8-16, 656/10- 11, 672/10 to 674/4, 1403/23 to 1404/6, 1582/5-14, 1608/21 to 1609/4.

5. The natural ecosystem of the National Forests in Texas contains mostly mixed forests of pine and hardwood. Gov't Ex. 19, 1992 Five Year Review, at 3-70, no. 1; Gov't Ex. 243A, 1996 LRMP, at 10.

6. The even-aged management practices maximize the production of southern pines (loblolly, shortleaf, and longleaf) and reduce hardwood tree species. R. 452/4-19, 456/4-24, 466/5 to 467/3, 656/7 to 658/9; Gov't Ex. 15, 1987 LRMP, at J-4 to J-11.

7. Under the 1987 LRMP, the even-aged management areas were, at times, referred to as "pine plantations." Gov't Ex. 15, 1987 LRMP, at IV-55.

8. Even-aged management is not permitted in certain areas of the National Forests in Texas. Commercial timber production of any kind is precluded on approximately 95,000 acres or 14.9% of the National Forests in Texas, *e.g.*, wilderness and scenic areas. R. 754/7-11; Gov't Ex. 15, 1987 LRMP, at IV-11 to IV-12, Amendment 6 at 8.

9. The 1987 LRMP contemplated that even-aged management would be carried out on approximately 10% (63,840 acres) of the total National Forest land over ten years. Gov't Ex. 15, 1987 LRMP, at IV-53. But, since the approval of the 1987 LRMP, the Forest Service has actually carried out even-aged regeneration on approximately 3.8% of the total National Forest land. R. 766/23, 792/8.

10. In 1995, 0.2% of the National Forests in Texas were harvested using even-aged regeneration. R. 766/23. The breakdown for each prior year is: 1.2% in 1987; 1% in 1988; 0.3% in 1989; 0.4% in 1990; 0.2% in 1991; 0.2% in 1992; 0.2% in 1993; and 0.2% in 1994. R. 766/9-23.

11. The estimate of 3.8% does not account for salvage volume because salvage is in response to an unplanned and unexpected happening or event. R. 8.05/1 to 807/24, 872/20-25. Salvage is not a part of even-aged management. *Id.* For illustrative purposes, however, the total acreage of timber subject to even-aged harvesting and salvage for the last nine years represents approximately 8% of the forested lands on the four National Forests. R. 767/20, 808/2-5.

12. This number rises to 9.5% when it is calculated for only those forested lands suitable for commercial timber harvest, thus excluding the approximately 95,000 acres of unsuitable area. R. 808/12 to 809/7.

13. The National Forests in Texas consist of uneven-aged forests made up of even-aged stands. R. 993/23-24, 1406/22-23, 1443/19 to 1444/14. Even-aged management across the forests creates a mosaic of tree stands of different ages, classes, and species mixes, thus providing for a mosaic

of different habitats. *See, e.g.*, Gov't Exs. 236-37 (map and key demonstrating the mosaic of age-class distribution on the Angelina National Forest); Gov't Exs. 238-39 (map and key demonstrating the mosaic of forest type or species-class distribution on the Angelina National Forest).

14. To manage for diversity, the Forest Service tracks and provides for a diversity of habitats by collecting information on tree species. The Continuous Inventory of Stand Conditions database provides an overview of the age-class distribution for all National Forests in Texas. Gov't Ex. 95; R. 889/14 to 891/4.

15. There is controversy about what a "natural" forest is because ecological systems are dynamic and change through time. R. 311/5-15, 1547/1-11.

16. There is general consensus among plant ecologists, however, to use close to pre-European settlement of North America as a reference point for what is "natural" because it is the first point in time in which there are a variety of lines of evidence from which ecologists can reconstruct vegetation patterns. R. 1547/16-24.

17. A variety of factors determined what the pre-European settlement or "natural" forest looked like. In addition to landscape location and physical variables such as nearness to water or soil texture and fertility, disturbances had an important influence in shaping the composition and structure of forests throughout the Southeast. R. 1555/3-12.

18. A "disturbance" is an event or occurrence that abruptly disrupts the forest structure and process. A

disturbance can be caused naturally or by man. R. 1556/7-13. Just as forests were variable on the landscape, the disturbance regimes found in these forests also varied. And, the structure and composition of the forests influenced the disturbance regime. R. 1557/15-22. Disturbances that contributed to the pre-European or "natural" forest were fire and wind events, impacts of insects and disease, and flooding. R. 1555/13 to 1556/3, 1650/3 to 1657/2, 1659/21 to 1663/8.

19. Some evidence shows that, under natural circumstances, East Texas may have been an uneven-aged forest made up of even-aged patches caused by disturbances. R. 993/23 to 994/1, 1569/6-14, 1605/12 to 1606/5 (literature has mixed information).

20. Even-aged management introduces a variety of disturbances. R. 1556/17-18.

21. The disturbances created by even-aged management are similar to fire and wind disturbances in some ways. With the exception of site preparation activities, harvesting by an even-aged method results in openings in the canopy somewhat similar to that which occurs naturally through wind events. R. 1570/8-21. The two are dissimilar in that canopy openings that occur from wind events will vary widely in size and distribution over the forest, while canopy openings that occur as a result of even-aged harvesting will be generally even-sized and evenly distributed over the forest landscape. On average, the openings created by even-aged harvesting will be approximately 30 acres, which is within the range of natural disturbances. R. 1570/21 to 1572/11.

22. Even-aged management, if uniformly applied, produces fairly moderate-size habitat patches distributed across the landscape. R. 1576/18 to 1582/10; Gov't Ex. 236, 237 (map showing patches of age-class as distributed over the Angelina National Forest).

23. Three groups of organisms are adversely impacted by the characteristics of an even-aged managed forest: (1) species dependent on large patches of interior forests; (2) species dependent upon characteristics of old forests; and (3) species that cannot tolerate the change in stand conditions at the micro-level such as change in temperature or sunlight. R. 1584/3 to 1885/15.

24. Species such as neotropical migrants, which depend on larger, uninterrupted older forest, are provided for in the National Forests in Texas because there are large areas of the forest not dedicated specifically to even-aged management, *e.g.*, wilderness areas, scenic areas, and other special management or interest areas. These areas will continue to be old forest and are dispersed across the forests in a way that provides required habitat for organisms like neotropical migrants. In addition, even within areas that are designated as general forest management areas (where even-aged management may occur), there are fairly large pieces of bottomland hardwood forest that remain uncut and fairly intact habitats for neotropical migrants (R. 1586/16 to 1587/24) and a significant amount of large, older even-aged stands necessary to the birds' survival (R. 1401/19 to 1402/11).

Conclusions of Law and Analysis

Section 1604(g)(3)(B) of the NFMA provides:

> (g) Promulgation of regulations for development and revision of plans; environmental considerations; resource management guidelines; guidelines for land management plans. As soon as practicable, . . . the Secretary shall . . . promulgate regulations, under the principles of the Multiple-Use Sustained-Yield Act of 1960, that set out the process for the development and revision of the land management plans, and the guidelines and standards prescribed by this subsection. The regulations shall include, but not be limited to--
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> * * *
>
> (3) specifying guidelines for land management plans developed to achieve the goals of the Program which--
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> * * *
>
> (B) provide for diversity of plant and animal communities based on the suitability and capability of the specific land area in order to meet overall multiple-use objectives, and within the multiple-use objectives of a land management plan adopted pursuant to this section, provide, where appropriate, to the degree practicable, for steps to be taken to preserve the diversity of tree species similar to

> that existing in the region controlled by the plan . . . .

16 U.S.C. § 1604(g)(3)(B). The "multiple-use objectives" are set forth in the Multiple-Use Sustained-Yield Act of 1960 ("MUSYA"), 16 U.S.C. § § 528-31. MUSYA requires (1) that the National Forests be managed for the "multiple use" of various renewable resources, including "recreation, range, timber, watershed, and wildlife and fish," and (2) that the "periodic output" of such resources be maintained "in perpetuity . . . without impairment of the productivity of the land." 16 U.S.C. § § 528, 529, 531. MUSYA recognizes that "some land will be used for less than all of the resources." 16 U.S.C. § 531(a).

After extensively reviewing the legislative history of the NFMA and regulations, Wilkinson and Anderson conclude:

> [S]ection 6(g)(3)(B) has three complementary meanings in the context of timber planning. First, it is a general mandate to bring timber production into balance with wildlife and ecological values. Second, it limits the use of forest conversions to cases where the conversion can be justified by its benefit to nontimber resources. Third, it prohibits monoculture. These three elements, when taken together, require the Forest Service to look at the forest as an ecological whole and to ensure that, over time, the forest is not converted into a "tree farm."

WILKINSON & ANDERSON, *supra*, at 173.

The NFMA requires that the Secretary of Agriculture promulgate regulations that provide for diversity. The Secretary promulgated two sections related to diversity: 36 C.F.R. § § 219.26, 219.27(a)(5), (g). Section 219.26 provides:

> Forest planning shall provide for diversity of plant and animal communities and tree species consistent with the overall multiple-use objectives of the planning area. Such diversity shall be considered throughout the planning process. Inventories shall include quantitative data making possible. the evaluation of diversity in terms of its prior and present condition. For each planning alternative, the interdisciplinary team shall consider how diversity will be affected by various mixes of resource outputs and uses, including proposed management practices. (Refer to § 219.27(g).)

36 C.F.R. § 219.26. Section 219.27 provides in part:

> The minimum specific management requirements to be met in accomplishing goals and objectives for the National Forest System are set forth in this section. These requirements guide the development, analysis, approval, implementation, monitoring and evaluation of forest plans.
> (a) *Resource protection*. All management prescriptions shall--

* * *

> (5) Provide for and maintain diversity of plant and animal communities to meet overall multiple-use objectives, as provided in paragraph (g) of this section;
>
> * * *
>
> (g) *Diversity*. Management prescriptions, where appropriate and to the extent practicable, shall preserve and enhance the diversity of plant and animal communities, including endemic and desirable naturalized plant and animal species, so that it is at least as great as that which would be expected in a natural forest and the diversity of tree species similar to that existing in the planning area. Reductions in diversity of plant and animal communities and tree species from that which would be expected in a natural forest, or from that similar to the existing diversity in the planning area, may be prescribed only where needed to meet overall multiple-use objectives. Planned type conversion shall be justified by an analysis showing biological, economic, social, and environmental design consequences, and the relation of such conversions to the process of natural change.

36 C.F.R. § 219.27(a)(5), (g) (emphasis in original).

The Committee of Scientists, appointed by the Secretary of Agriculture, provided advice on the regulations. 16 U.S.C. § 1604(h); *see also* WILKINSON &

ANDERSON, *supra*, at 43-44 (explaining the work of the Committee of Scientists). With respect to diversity, the Committee of Scientists stated that the NFMA regulations "'should go beyond a narrow and limited restatement of the language of the [NFMA] to assure that the Forest Service shall indeed "provide for" diversity by maintaining and preserving existing variety.'" WILKINSON & ANDERSON, *supra*, at 194-95 (quoting *Final Report of the Committee of Scientists*, 44 Fed. Reg. 26,609 (1979)). "Reductions in diversity--such as forest type conversions--are permitted only where needed to meet overall multiple-use objectives and must be justified by an elaborate analysis of potential consequences." WILKINSON & ANDERSON, *supra*, at 195. "[T]he NFMA regulations require Forest Service planners to deal with diversity on a comprehensive basis, rather than limiting their focus to the issue of forest conversion and monoculture. Planners must ensure that the essential ecological components of each national forest are adequately protected." *Id.*

The Committee of Scientists, however, ultimately concluded that it was impossible to write *specific* regulations that would provide for diversity. The Committee of Scientists stated:

> Provision for "diversity" as required by NFMA is one of the most perplexing issues dealt with in the draft regulations. We believe it is impossible to write specific regulations to "provide for" diversity.

44 Fed. Reg. 26,600-01. "Although the statement of policy [to provide for diversity] is clear, there remains a great

deal of room for honest debate on the translation of policy into management planning requirements and into management programs." *Id.* at 26,608. Section 219.3 broadly defines "diversity" as "[t]he distribution and abundance of different plant and animal communities and species within the area covered by a land and resource management plan." 36 C.F.R. § 219.3. But the regulations do not dictate that the Forest Service analyze diversity in any specific way, and courts defer to the Forest Service's method of diversity unless it is irrational. *See Sierra Club v. Marita,* 46 F.3d at 621. "[I]t is difficult to discern any concrete legal standards on the face of [section 1604(g)(3)(B)]." WILKINSON & ANDERSON, *supra*, at 296. While acknowledging the debate over the precise meaning of "diversity," the Fifth Circuit has not defined the "outer boundaries" of the NFMA's protection and diversity requirements. *Sierra Club v. Espy,* 38 F.3d at 801.

The Forest Service's even-aged management practices may be diminishing "diversity," particularly at the "alpha" level.[9] Documentary evidence and testimony at trial, including some from the Federal Defendants' witnesses, showed that even-aged management, as practiced by the Forest Service in the National Forests in Texas, substantially alters plant and animal habitat as well as creates monocultures of pine trees. The plant and animal habitat is altered when even-aged management practices remove the protective forest canopy and expose the forest floor to sunlight. Even-aged management also involves site preparation activities such as

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[9] "Alpha diversity" is diversity within a stand while "beta diversity" is diversity between stands. *Sierra Club v. Robertson,* 784 F. Supp. 593, 611 (W.D. Ark. 1991), *aff'd*, 28 F.3d 753 (8th Cir. 1994).

shearing and piling of vegetation from the forest floor. When the canopy is removed, plant and animal life that depends on the canopy is diminished. Once an area is harvested under even-aged management, pine trees are regenerated, often removing any competing hardwoods. The Forest Service has referred to these areas as "pine plantations."

Defendants argue that despite the loss of some species of plants and animals under even-aged management, those species are replaced by different species under the even-aged forest habitat. Defendants further argue that even though a species may be eradicated from a particular management area, other areas of the forest (*e.g.*, wilderness and scenic) provide sufficient habitat for species that cannot survive even-aged management practices. For example, although a Forest Service scientist testified that some bird species would not survive in the mosaic of even-aged stands, other areas of the forest would provide sufficient habitat for the species.

With respect to the pine monocultures, the Federal Defendants presented some evidence that the "natural" forest may have been an uneven-aged forest made up of even-aged patches. Defendants argue that the Forest Service's even-aged management activities are designed to mimic the natural processes of pre-European settlement forests. The Forest Service justifies the use of fire and other methods (*e.g.*, herbicides) to remove hardwoods by claiming that these practices are similar to the frequency of fire in the natural, pre-European settlement forest. The Forest Service's hypothesis that the Texas forests were predominantly pine in their natural state, however, is undermined by their regular practice of having to eradicate hardwoods and other plant life that naturally compete with the pine trees shortly after

harvesting and regeneration. This practice must be to meet other multiple-use objectives such as timber production. *See* 16 U.S.C. § 1604(g)(3)(B).

The Forest Service's even-aged management practices are drastically reducing plant and animal species in some areas of the forest and creating areas of pine monoculture. But, the court cannot conclude that the Forest Service's actions are irrational or otherwise arbitrary and capricious. The regulations do not dictate that the Forest Service analyze diversity in any specific way. Additionally, the court is required to look at diversity over the entire planning area (here the four National Forests in Texas) rather than within an area of monoculture. *See* 36 C.F.R. § 219.3.[10] Therefore,

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[10] There is some tension between sections 219.3 and 219.19. Section 219.3 requires an evaluation of "diversity" in terms of the entire planning area (here the four National Forests in Texas). But, section 219.19 requires: "Fish and wildlife habitat shall be managed to maintain viable populations of existing native and desired non-native vertebrate species in the planning area. . . . [A] viable population shall be regarded as one which has the estimated numbers and distribution of reproductive individuals to insure its continued existence is *well distributed in the planning area.*" 36 C.F.R. § 219.19 (emphasis added). The regulatory history of section 219.19 indicates that the Forest Service must maintain the existing species distribution throughout each National Forest. Wilkinson and Anderson explain: "[W]hile plans can result in habitat conditions that reduce a species' *density*, the plans must allow that species . . . maintain its existing *distribution.*" WILKINSON & ANDERSON, *supra*, at 298-99 (citing FOREST SERVICE AND PANEL OF CONSULTANTS ON PROPOSED REVISION OF NFMA REGULATIONS, SUMMARY REPORT 4 (June 30-July 2, 1982)) (emphasis in original). Thus, it may be permissible for the Forest Service to displace species from certain monoculture areas into other locations in the "planning area" under the definition of "diversity" in section 219.3. But, in doing so, the Forest Service may be afoul of section 219.19's requirement that

under (1) the APA's deferential standard of review, (2) the deference to the Forest Service's expertise, and (3) the ambiguous NFMA statute and regulations on diversity, the court determines that, on the evidentiary record in this case, the Federal Defendants have not violated section 1604(g)(3)(B) of the NFMA or sections 219.26 and 219.27(a)(5) and (g) of the regulations. This determination with respect to diversity, however, does not address the issue of adequate monitoring under section 219.26.

PROTECTING KEY RESOURCES

Primary Legal Standards Governing Protection of Key Resources

Section 1604(g)(3)(F)(v) of the NFMA provides:

> (g) Promulgation of regulations for development and revision of plans; environmental considerations; resource management guidelines; guidelines for land management plans. As soon as practicable, . . . the Secretary shall . . . promulgate regulations, under the principles of the Multiple-Use Sustained-Yield Act of 1960, that set out the process for the development and revision of the land management plans, and the guidelines and standards prescribed by this subsection. The regulations shall include, but not be limited to--

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the species be "well distributed in the planning area."

* * *

(3) specifying guidelines for land management plans developed to achieve the goals of the Program which--

* * *

(F) insure that clearcutting, seed tree cutting, shelterwood cutting, and other cuts designed to regenerate an evenaged stand of timber will be used as a cutting method on National Forest System lands only where--

* * *

(v) such cuts are carried out in a manner consistent with the protection of soil, watershed, fish, wildlife, recreation, and esthetic resources, and the regeneration of the timber resource.

16 U.S.C. § 1604(g)(3)(F)(v).[11]

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[11] Section 219.27(c)(6) of the regulations practically mirrors the statutory requirement:

> The minimum specific management requirements to be met in accomplishing goals and objectives for the National Forest System are set forth in this section. These requirements guide the development, analysis, approval, implementation, monitoring and evaluation of forest plans.
>
> * * *
>
> (c) *Silvicultural practices*. The following management requirements apply to timber harvest and cultural treatments:

In interpreting the NFMA and regulations on protection of key resources, the Fifth Circuit has stated:

> The directive that national forests are subject to multiple uses, including timber uses, suggests that the mix of forest resources will change according to a given use. Maintenance of a pristine environment where no species' numbers are threatened runs counter to the notion that NFMA contemplates both even-and uneven-aged timber management. Indeed, NFMA regulations anticipate the possibility of change and provide that "reductions in diversity of plant and animal communities and tree species from that which would be expected in a natural forest, or from that similar to the existing diversity in the planning area, may be prescribed only where needed to meet overall multiple-use objectives." 36 C.F.R. § 219.27(g); *see also* 16 U.S.C. § 1604(g)(3)(C) (LRMP must ensure research and evaluation of effects of each management system to assure no "*substantial and permanent* impairment" of land productivity)

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* * *

(6) Timber harvest cuts designed to regenerate an even-aged stand of timber shall be carried out in a manner consistent with the protection of soil, watershed, fish and wildlife, recreation, and aesthetic resources, and the regeneration of the timber resource.

36 C.F.R. § 219.27(c)(6).

> (emphasis added); 16 U.S.C. § 1604(g)(3)(E)(i) (LRMP must provide that timber be harvested only where "soil, slope, or other watershed conditions will not be *irreversibly* damaged") (emphasis added). That protection means something less than preservation of the status quo but something more than eradication of species suggests that this is just the type of policy-oriented decision Congress wisely left to the discretion of the experts--here, the Forest Service.

Sierra Club v. Espy, 38 F.3d at 800. The Fifth Circuit, however, warned:

> The Forest Service's discretion, however, is not unbridled. The regulations implementing NFMA provide a minimum level of protection by mandating that the Forest Service manage fish and wildlife habitats to insure viable populations of species in planning areas. 36 C.F.R. § 219.19.

Id. at 800-01.

Soil

Findings of Fact

1. The Forest Service's timber harvesting practices are causing substantial and permanent soil erosion on the National Forests in Texas. Pls.' Exs. 1-3, 5, 80-83, 102, 108, 173, 175-82, 210-16, 249-50, 308-11, 318, 358, 386, 551-52,

650x (soil erosion study); Gov't Ex. 42, at 27-33; R. 120/14 to 121/5, 338/8 to 342/16, 347/10 to 348/14, 349/3 to 350/18, 358/10 to 359/8, 609/2-24. The Forest Service has failed to conserve the soil resource during its management.

2. The Forest Service's timber harvesting practices are eroding nutrient-rich soil from the forest land. R. 346/5 to 348/14. The eroded soil fills in pools and is deposited in streams and gullies. *Id.*

3. The erosion is carving channels or gullies from a few inches deep to several feet deep. R. 340/13-16, 348/20-21, 349/22-24; Pls.' Ex. 650x. When run-off of water and soil from a timber harvest site reaches streams it changes their character by making them wider and shallower and by altering the stream's water flow. R. 355/1-5.

4. An even-aged management site, as managed by the Forest Service, produces increased run-off of water and soil for thirteen years before a return to normal run-off levels. This return to normal run-off occurs only after the nutrient-rich soil has been irreversibly displaced off the forest land. R. 346/15-21.

5. The Forest Service does not require post-harvest restoration of some areas affected by and contributing to erosion. R. 1230/14 to 1231/4.

6. In addition to eroding soil from the forest land, Forest Service management practices are substantially and permanently reducing organic and other essential matter in the forest soils.

7. The productivity of soil is dependent on the presence of nitrogen, a primary nutrient supporting the plant and animal life in the forests. R. 407/4-18, 1264/9-12.

8. Nitrogen exists in the organic matter present in soil; both nitrogen and organic matter are essential for the long term productivity of the soil. R. 407/4-18.

9. Even-aged management causes loss of nitrate (a form of nitrogen), through run-off from timber harvest sites for twenty years and longer. R. 420/10-18.

10. Soil is replenished with nutrients that are formed from the decomposition of root systems, leaf litter, coarse woody debris, and other natural matter on the forest floor. R. 464/19-25, 548/2-4, 550/10-21.

11. The biologically active portion of the forest floor consists of the following: the litter (or topmost layer, comprised of leaves and large pieces of plant matter); the duff layer (organic matter in a more advanced state of decomposition than the litter layer); and the humus layer (most commonly known as soil, which is divided for descriptive purposes into the A-horizon (topmost) and the B-horizon). The duff layer exists above the A-horizon of the soil. R. 522/9-17, 538/7-9.

12. Fungi, bacteria, insects and nematodes, duff, and humus return essential nutrients to the soil system. R. 523/9-16, 537/3-25. Organic matter in the soil is essential to forest health. R. 1074/13-19.

13. Ectomycorrhizae, a type of fungus present in the biologically active portion of soil, exist in symbiosis with trees and are essential for providing trees with phosphorous, nitrogen, and water. R. 408/13 to 409/18.

14. Studies of the effects of even-aged management on essential fungi and bacteria in soil have documented that five years after an even-aged timber harvest, only one percent of essential fungi and bacteria remain in the soil. R. 407/19 to 408/9.

15. Removal of the litter, duff, and humus layer decreases the productivity of the soil because the decomposition of natural matter no longer provides essential nutrients to the soil. R. 402/2-25, 404/1 to 405/23.

16. The sudden growth of vegetation after clearcutting does not indicate the maintenance of soil fertility but rather a significantly increased decomposition and loss of organic matter from soil. R. 1729/25 to 1730/15.

17. Even-aged management, as practiced by the Forest Service in the National Forests in Texas, results in the removal of all above-ground woody vegetation. R. 406/8-21, 550/6-21, 912/15-22.

18. There has been a significant decrease in the litter, duff, and humus layers resulting from even-aged management practices in Compartment 98 of the Sam Houston National Forest. R. 411/23 to 415/18, 536/7-21.

19. The Forest Service does not observe, measure, inventory, or monitor the organic content of soil during the

course of their management activities in the National Forests in Texas. R. 936/3-14, 1083/14-24, 1197/13-15, 1199/16-20.

20. The reduction of the organic content of soil, caused by the Forest Service's even-aged management practices, is noticeable in twenty to thirty year old pine stands in the National Forests in Texas. R. 530/17-23.

21. The Forest Service's timber harvesting practices are causing substantial and permanent damage to the essential, organic matter in the soil. Once lost, the organic matter does not return for hundreds of years, and, in some instances, thousands of years. R. 536/7-21.

22. Forest Service management practices are causing irreversible damage to the soil resource.

Conclusions of Law and Analysis

In even-aged timber harvesting, the Forest Service must protect the soil resource. 16 U.S.C. § 1604(g)(3)(F)(v); 36 C.F.R. § 219.27(c)(6). Management plans must "insure research on and (based on continuous monitoring and assessment in the field) evaluation of the effects of each management system to the end that it will not produce substantial and permanent impairment of the productivity of the land." 16 U.S.C. § 1604(g)(3)(C); *see also* § 1604(g)(2)(B) (requiring collection of "inventory data on the various renewable resources, and soil and water, including pertinent maps, graphic material, and explanatory aids"). Management plans also must "insure that timber will be harvested from National Forest System lands only where--(i) soil, slope, or other watershed conditions will not be

irreversibly damaged . . . ." 16 U.S.C. § 1604(g)(3)(E)(i). In this section, Congress intended that the Forest Service "provide empirical guarantees that timber harvesting will not damage soils, water conditions, and fish habitats." WILKINSON & ANDERSON, *supra*, at 161.

The NFMA regulations require "conservation" of soil and water. Section 219.27(a)(1) provides that "all management prescriptions shall--(1) [c]onserve soil and water resources and not allow significant or permanent impairment of the productivity of the land . . . ." Section 219.27(b)(5) provides that "management prescriptions that involve vegetative manipulation of tree cover for any purpose shall--(5) [a]void permanent impairment of site productivity and ensure conservation of soil and water resources . . . ." "Conservation of soil and water resources involves the analysis, protection, enhancement, treatment, and evaluation of soil and water resources and their responses under management and shall be guided by instructions in official technical handbooks." 36 C.F.R. § 219.27(f).

The Forest Service is neither protecting nor conserving the key resource of soil. Forest Service management practices, which have been primarily even-aged, are causing severe erosion of soil from the forest landscape and related loss of organic matter. This soil loss is substantially and permanently impairing the productivity of the forest land and possibly timber production. The evidence at trial did not indicate which of the particular even-aged management practices was the primary cause of the severe soil erosion and derogation of the organic matter in the soil. The possible causes are numerous, including: poor site selection, excessive rutting and compaction, cutting within streamside

management zones, harvesting during poor soil conditions, intensive site preparation, eradication of hardwood trees from a site, and failure to restore damaged areas. In determining whether the Forest Service is in violation of the NFMA and regulations, the focus is on whether the soil resource is ultimately being protected rather than which of the even-aged practices is causing harm to the soil. The efficacy of particular even-aged management practices is within the discretion of the Forest Service so long as the soil resource remains protected.

Whatever Forest Service planning documents prescribe with respect to protection of soil, the evidence shows that, on-the-ground, the Forest Service is not protecting the soil resource. The Forest Service has stepped outside its discretion and acted arbitrarily and capriciously by failing to conduct its management activities in a way that prevents severe soil erosion. Accordingly, the court determines that Federal Defendants have violated sections 1604(g)(3)(E)(i) and (g)(3)(F)(v) of the NFMA and sections 219.27(a)(1), (b)(5), (c)(6), and (f) of the regulations. This determination with respect to soil, however, does not address the issue of adequate monitoring of the soil resource.

Watershed

Findings of Fact

1. The court's findings of fact on the soil resource issue are incorporated herein.

2. The National Forests in Texas lie within the watersheds of five of Texas's major rivers: Angelina, Neches, Trinity, San Jacinto, and Sabine. R. 854/8 to 855/9.

3. Major water bodies such as Lake Livingston, Lake Conroe, Sam Rayburn Reservoir, and Toledo Bend Reservoir share boundaries with the National Forests in Texas. R. 854/8-25, 855/1-9.

4. The Forest Service classifies the streams running through the National Forests in Texas as perennial, intermittent, and ephemeral. Gov't Ex. 15, 1987 LRMP, at IV-35, IV-87.

5. The Forest Service's management prescriptions afford streams and associated riparian areas certain protection from the effects of timber harvesting. Gov't Ex. 15, 1987 LRMP, at IV-35, IV-87; Gov't Ex. 243A, 1996 LRMP, at 158-60.

6. Under the 1987 LRMP, management prescriptions for perennial streams required a stringer (an area directly adjacent to a stream course) of one hundred feet on either side of the stream. Intermittent streams required a stringer of sixty-six feet. The purpose of stringers is to provide "'pockets' of vegetation that will remain free from silvicultural manipulation for fiber production." Gov't Ex. 15, 1987 LRMP, at IV-87 to IV-88. Under the 1996 LRMP, streamside management zones are protected from timber production. The streamside management zone consists of a fifty-foot "primary zone" and a "secondary zone" extending from the "primary zone" to a distance designated by the Forest Service on a case-by-case basis. Skidders and other logging equipment are not permitted in the "primary zone." Gov't Ex. 243A, 1996 LRMP, at 152, 158.

7. The Forest Service's standards and guidelines require it to protect stream courses by preventing logging debris from entering or remaining in stream courses during timber harvesting and by limiting the use of tracked and wheeled equipment in stringer areas. R. 1111/22-25; Gov't Ex. 15, 1987 LRMP, at IV-61, IV-89; Gov't Ex. 243A, 1996 LRMP, at 158-59.

8. On-the-ground, however, the Forest Service permits logging for timber production purposes right up to the stream banks throughout the National Forests in Texas. Pls.' Exs. 4, 17, 46, 105-06, 218, 244-46, 309, 650x, photograph nos. 47-48; R. 29/12-21, 164/6-15. For example, logging within streamside management zones has occurred on: Nebletts Creek (R. 72/1-21, 76/9 to 78/6); Little Lake Creek (R. 73/23 to 75/6); Jayhawker Creek (R. 75/9-25); Miller Creek (R. 78/8-19); Peach Creek (R. 171/12-24; Pls.' Ex. 83); and Clark's Creek (R. 179/12-17).

9. Logging operations and use of heavy equipment within stream course zones is causing erosion, compaction, and rutting. R. 608/6 to 615/9, 629/4-8, 1122/12 to 1133/13.

10. Forest Service management practices have blocked streams with tree stumps, slash, and other logging debris. Pls.' Exs. 4-6, 16, 244-45, 569, 581 (videotape), 650x; R. 83/12 to 84/2, 163/21 to 164/14, 698/14-22.

11. Logging operations within streamside management zones have substantially and permanently affected water and watersheds in the National Forests in Texas. R. 78/8-23, 628/12 to 631/14, 697/17 to 698/5; Pls.' Exs. 244-46. For example, the Forest Service has failed to protect water

resources in the Angelina, Sabine, and Davy Crockett National Forests. Pls.' Ex. 650x; R. 609/19 to 610/2.

12. Forest Service management practices have caused substantial and permanent soil erosion and sediment deposit in streams and waterways. The depositing of soil and sediment in streams and waterways has degraded water quality and killed fish. R. 163/11 to 164/15, 171/12-24, 224/1-11, 609/1-24 (a 300-foot gully eroding into a riparian area), 664/10 to 665/2, 1367/5 to 1368/22; Pls.' Exs. 16, 83, 569; Gov't Ex. 15, 1987 LRMP, at J-28.

13. The Sabine Shiner and Scaly Sand Darter, which both require clear and sandy streams, are declining in population on the National Forests in Texas. R. 1367/5 to 1371/17. The Forest Service believes that siltation may be the cause. R. 1370/17-19. In response to these declines, the Forest Service advised its staff to concentrate on preventing siltation and erosion. R. 1367/24 to 1368/22; Gov't Ex. 64.

14. Cutting vegetation in a streamside zone removes the shade cover from the stream thereby raising the water temperature of the stream and changing the chemical composition of the stream. Gov't Ex. 15, 1987 LRMP, J-28.

15. Water runs with increasing velocity away from an even-aged site toward surface water bodies like streams, carrying large quantities of the topsoil of the A-horizon and the nutrients contained therein. R. 120/14 to 121/5, 339/8 to 349/9, 609/2-23.

16. Substantial and permanent erosion of the soil's A-horizon into surface water in the National Forests in Texas is

occurring, which changes the chemical composition of the stream. R. 121/5, 339/8 to 349/9, 609/2-23; Pls.' Exs. 175-76, 180-81.

18. Reviewing the testimony and exhibits regarding the Sam Houston, Angelina, Sabine, and Davy Crockett National Forests, the court finds that it has a representative and comprehensive picture of the Forest Service's management practices related to the protection of watersheds.

19. Forest Service management practices are causing irreversible damage to the watershed resource.

Conclusions of Law and Analysis

In harvesting timber, the Forest Service must protect and conserve the watershed resource. 16 U.S.C. § 1604(g)(2)(B), (g)(3)(C), (g)(3)(E)(i), (g)(3)(E)(iii), (g)(3)(F)(v); 36 C.F.R. § 219.27(a)(1), (a)(4), (b)(5), (c)(6), (e), (f) (as discussed in the conclusions of law section on the soil resource). "[P]rotection is provided for streams, streambanks, shorelines, lakes, wetlands, and other bodies of water from detrimental changes in water temperature, blockages of water courses, and deposits of sediment, where harvests are likely to seriously and adversely affect water conditions or fish habitat." 16 U.S.C. § 1604(g)(3)(E)(iii). "All management prescriptions shall . . . [p]rotect streams, streambanks, shorelines, lakes, wetlands, and other bodies of water as provided under paragraph[] . . . (e) of this section. . . ." 36 C.F.R. § 219.27(a)(4). Paragraph (e) of section 219.27 provides:

> *Riparian areas*. Special attention shall be given to land and vegetation for approximately 100 feet from the edges of all perennial streams, lakes, and other bodies of water. This area shall correspond to at least the recognizable area dominated by the riparian vegetation. No management practices causing detrimental changes in water temperature or chemical composition, blockages of water courses, or deposits of sediment shall be permitted within these areas which seriously and adversely affect water conditions or fish habitat. Topography, vegetation type, soil, climatic conditions, management objectives, and other factors shall be considered in determining what management practices may be performed within these areas or the constraints to be placed upon their performance.

36 C.F.R. § 219.27(e). Watershed protection involves managing the forest in a manner that: (1) prevents erosion, (2) provides for a steady flow of water run-off, (3) prevents silt and sedimentation in streams and waterways, and (4) protects fish and wildlife. *See* WILKINSON & ANDERSON, *supra*, at 201-07. "Taken together, the NFMA water quality provisions require strong measures to protect water resources and fish habitats from detrimental impacts of timber harvesting and road construction." *Id.* at 223.

The Forest Service is neither protecting nor conserving the key resource of watershed. Forest Service management practices, which have been primarily even-aged, are causing substantial and permanent (1) erosion within waterways, (2)

deposit of soil, silt, and sedimentation in waterways, and (3) disruption of water run-off. This derogation of the watershed resource is substantially and permanently impairing the productivity of the forest land. As determined in the previous section on the soil resource, the Forest Service's timber harvesting activities are causing severe soil erosion from the forest land. This soil erosion in turn is adversely affecting the waterways that are an integral part of the watershed resource. First, excessive run-off from timber-harvest sites causes erosion and scouring of streams. The evidence at trial indicated that some of the streams in the National Forests in Texas have been eroded away or "blown-out" by excessive water run-off. Second, the erosion and displacement of soil from timber-harvest sites are filling in streams or otherwise causing severe siltation and sedimentation. Siltation and sedimentation detrimentally changes the water's temperature and chemical composition. Third, once a stream is eroded away or filled in, water flow rates are adversely affected. For example, an increase in a water flow rate (1) contributes to the risk of flooding after a storm and (2) deprives the watercourse of a steady flow of water needed to support plant, fish, and other animal life.

The Forest Service's timber harvesting practices also are damaging the watershed resource by permitting (1) timber harvesting within streamside management zones and (2) blocking streams with tree stumps, slash, and other logging debris. The Forest Service's harvesting within streamside management zones is causing irreversible damage to the

watershed resource.[12] First, excessive removal of vegetation around a stream exposes the soil to erosion in and surrounding the stream and its banks. Second, without vegetative cover, the stream itself is subjected to sunlight, which increases water temperature, changes the chemical composition, and destroys fish habitat. Third, timber harvesting within the streamside zone deposits tree stumps, slash, and other logging debris in the streams.[13] Blockage of the streams disrupts steady, water flow run-off.

Whatever Forest Service planning documents prescribe with respect to protection of watershed, the evidence shows that, on-the-ground, the Forest Service is not protecting or conserving the watershed resource. The Forest Service has

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[12] Under the Forest Service's interpretation, "special attention" in section 219.27(e) does not prohibit the Forest Service from cutting within a 100 feet of a perennial stream so long as the cutting is for a purpose other than timber production, *i.e.*, wildlife management. The Forest Service's interpretation of its own regulations will control if that interpretation is not "'plainly erroneous or inconsistent with the regulations.'" *Robertson,* 490 U.S. at 359 (quoting *Bowles,* 325 U.S. at 414, 65 S.Ct. at 1217). The court determines that the Forest Service's interpretation is not plainly erroneous or inconsistent with the regulations if in fact that is its practice on-the-ground. The evidence at trial, however, demonstrated that, without a non-timber production reason, the Forest Service was cutting trees within streamside management zones or, in some cases, totally removing the streamside management zone by removing every tree surrounding a stream.

[13] The Forest Service presented some evidence that it monitored the logging operation on Compartment 98 of the Sam Houston National Forest with respect to discarding logging debris in streams. The overwhelming weight of the evidence at trial, however, was that logging debris was routinely left in streams throughout the National Forests in Texas.

stepped outside its discretion and acted arbitrarily and capriciously. Accordingly, the court determines that Federal Defendants have violated sections 1604(g)(3)(E)(i), (g)(3)(E)(iii), and (g)(3)(F)(v) of the NFMA and sections 219.27(a)(1), (a)(4), (b)(5), (c)(6), (e), and (f) of the regulations. This determination with respect to watershed, however, does not address the issue of adequate monitoring of the watershed resource.

Fish and Wildlife

In even-aged timber harvesting, the Forest Service must protect the fish and wildlife[14] resources. 16 U.S.C. § 1604(g)(3)(F)(v); 36 C.F.R. § 219.27(c)(6). Section 219.19 of the regulations provides:

> Fish and wildlife habitat shall be managed to maintain viable populations of existing native and desired non-native vertebrate species in the planning area. For planning purposes, a viable population shall be regarded as one which has the estimated numbers and distribution of reproductive individuals to insure its continued existence is well distributed in the planning area. In order to insure that viable populations will be maintained, habitat must be provided to support, at least, a minimum number of

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[14] Although "wildlife" could include all members of the animal kingdom living on the forest land, the NFMA and regulations focus primarily on vertebrate game and nongame species. *See* WILKINSON & ANDERSON, *supra*, at 273 (citing 36 C.F.R. § 219.19).

> reproductive individuals and that habitat must be well distributed so that those individuals can interact with others in the planning area.

36 C.F.R. § 219.19. With respect to the viable populations requirement, Wilkinson and Anderson explain: "[A] sufficient number of reproductive individuals of all existing vertebrate species must be maintained in order to ensure viable populations; [and] habitat for any particular species must be distributed throughout each national forest." WILKINSON & ANDERSON, *supra*, at 297. With respect to the "well distributed" requirement, "while plans can result in habitat conditions that reduce a species' *density*, the plans must allow that species . . . maintain its existing *distribution.*" *Id.* at 298-99 (citing FOREST SERVICE AND PANEL OF CONSULTANTS ON PROPOSED REVISION OF NFMA REGULATIONS, SUMMARY REPORT 4 (June 30-July 2, 1982)) (emphasis in original). A well distribution of species guards against "species isolation" in which the viability of species is threatened because some of the species are isolated on an island of suitable habitat. WILKINSON & ANDERSON, *supra*, at 299.

The Plaintiffs have not carried their burden of showing that the Forest Service has failed to protect the fish and wildlife resources. The Plaintiffs did not produce sufficient evidence at trial that the Forest Service's timber harvesting activities are threatening viable populations of fish and wildlife. Although the Forest Service's timber harvesting activities are substantially and permanently affecting the watershed resource (which includes the component of fish habitat), the Plaintiffs did not offer evidence that in fact fish populations were threatened throughout the planning area.

Accordingly, in connection with the fish and wildlife resources, the court determines that Federal Defendants have not violated section 1604(g)(3)(F)(v) of the NFMA or sections 219.27(c)(6) and 219.19 of the regulations. This determination with respect to protecting fish and wildlife, however, does not address the issue of adequate inventorying and monitoring.

Recreation and Esthetic

In even-aged timber harvesting, the Forest Service must protect the recreation and esthetic resources. 16 U.S.C. § 1604(g)(3)(F)(v); 36 C.F.R. § 219.27(c)(6). "Esthetic" is a variable of "aesthetic," which means "relating to the sense of the beautiful." WEBSTER'S II NEW RIVERSIDE UNIVERSITY DICTIONARY 82, 444 (1988). Section 219.21(f) of the regulations provides:

> To the degree consistent with needs and demands for all major resources, a broad spectrum of forest and rangeland related outdoor recreation opportunities shall be provided for in each alternative. Planning activities to achieve this shall be in accordance with national and regional direction and procedural requirements of paragraphs (a) through (g) of this section.
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> * * *
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> (f) The visual resource shall be inventoried and evaluated as an integrated part of evaluating alternatives in the forest planning process, addressing both the landscape's visual

> attractiveness and the public's visual expectation. Management prescriptions for definitive land areas of the forest shall include visual quality objectives.
>
> 36 C.F.R. § 219.21(f).

Plaintiffs have not carried their burden of showing that the Forest Service has failed to protect the recreation and esthetic resources. With respect to recreation, Plaintiffs offered evidence that they are unable to recreate in clearcut areas because of the dense, thorny vegetation. R. 35/6-15, 150/1-4. This evidence, however, does not indicate that Plaintiffs' recreational opportunities are substantially and permanently foreclosed by even-aged management. In fact, there was some evidence that clearcuts provide better recreational opportunities for hunters. Gov't Ex. 15, 1987 LRMP, at J-29. With respect to the esthetic resource, Plaintiffs offered evidence that clearcuts leave a scene of devastation on the forest landscape. Pls.' Exs. 1-2, 109-10, 133-35, 210-11, 216-19; *see also* Gov't Ex. 15, 1987 LRMP, at J-29. The Plaintiffs, however, offered no evidence that the scene of devastation is permanent. With respect to section 219.21(f), the Forest Service presented evidence that it is inventorying the visual resource. R 895/1-20. Accordingly, the court determines that Federal Defendants have not violated section 1604(g)(3)(F)(v) of the NFMA or sections 219.27(c)(6) and 219.21(f) of the regulations with respect to these resources.

Timber

In even-aged timber harvesting, the Forest Service must protect the timber resource. 16 U.S.C. § 1604(g)(3)(F)(v); 36 C.F.R. § 219.27(c)(6). The Forest Service's even-aged management practices are often designed to suppress hardwoods through the use of intensive site preparation, herbicides, and prescribed burning. R. 839/19 to 840/6, 912/15-22; Gov't Ex. 2, at 1, 2-22, 27; Gov't Ex. 15, 1987 LRMP, at J-8 to J-9. Plaintiffs presented evidence that the suppression of hardwoods and the planting of non-native, pine monoculture increases the risk of insect damage to the trees. R. 447/3 to 448/11, 530/1-6, 546/8-18. Plaintiffs evidence, however, does not indicate that Forest Service management activities have actually caused substantial and permanent damage to the timber resource. Accordingly, the court determines that Federal Defendants have not violated section 1604(g)(3)(F)(v) of the NFMA or section 219.27(c)(6) of the regulations with respect to the timber resource.

It may seem anomalous that, on the one hand, the Forest Service has failed to protect the soil resource but that, on the other, Plaintiffs have not shown that the timber resource (which depends on the soil) has gone unprotected. These determinations are not in conflict. The court has determined that the Forest Service's even-aged management practices are causing severe erosion that has substantially and permanently damaged the soil resource. From this determination that the soil resource has been damaged through displacement and loss of organic matter, the court could draw a reasonable and highly probable inference that damage to the soil resource is causing damage to the timber resource, *i.e.*, loss of stand growth. In fact, Forest Service planning

documents suggest that loss of stand growth will occur on those sites in which the soil has been displaced. *See, e.g.*, Gov't Ex. 52, Final Environmental Impact Statement: Vegetation Management in the Coastal Plain/Piedmont dated January 1989 ("1989 FEIS"), at IV-86 to IV-87 ("Growth losses of 20-50 percent have been measured in stands where 0.5-2.0 inches of topsoil had been removed before planting."). The court, however, is reticent to determine that the Forest Service is in violation of the NFMA without stronger evidence that damage to the soil resource is in fact causing loss of stand growth. On this evidentiary record, Plaintiffs have not made such a showing.

INVENTORYING AND MONITORING

Findings of Fact

1. The court hereby incorporates all previously made findings of fact.

2. The Forest Service has not been inventorying or monitoring the populations or population trends of "management indicator species" ("MIS"), except the Red-Cockaded Woodpecker, Bald Eagle, major game species, and fish. R. 488/4 to 490/13, 651/17-25, 665/24 to 667/19, 1039/18-25, 1324/23 to 1326/18; Gov't Ex. 243A, Final Environmental Impact Statement dated 1996 ("1996 FEIS"), at App. F-1 to F-2.

3. To determine the effects of management activities, the Forest Service must select, inventory, and monitor the populations and population trends of MIS (as opposed to only maintaining habitat and assuming species are present). 36

C.F.R. § 219.19; R. 1383/15-22, 1389/20 to 1390/11, 1425/20 to 1426/10.

4. To maintain viable populations of existing native vertebrate species and ensure that those species are well distributed throughout the forest, a forest manager must set up a census program to determine the distribution and abundance of the particular species selected: R. 325/15 to 326/4.

5. Under the 1987 LRMP, the Forest Service selected MIS. The aquatic MIS were: Largemouth Bass, Bluegill, Blackspot Shiner, Scaly Sand Darter, Longear Sunfish, Weed Shiner, and Dusky Darter. The forest land MIS were: White-tailed Deer, Bobwhite Quail, Eastern Bluebird, Six-lined Racerunner, Eastern Wild Turkey, Yellow Breasted Chat, Red-Cockaded Woodpecker, Pileated Woodpecker, and Eastern Gray Squirrel. Gov't Ex. 15, Final Environmental Impact Statement dated April 1987 ("1987 FEIS"), at D-2 to D-3; Gov't Ex. 15, 1987 LRMP, at IV-33 (incorporating the 1987 FEIS references to MIS).

6. Under the 1996 LRMP, the Forest Service has selected MIS and included them within a new category of indicators called "management indicators" ("MI"). These MI are: Red-Cockaded Woodpecker; Incised Groove Burr; Slender Gay Feather; Scarlet Catchfly; Longleaf (Bluestem Series); Little Bluestem (Rayless Goldenrod Series); Navasota Ladies Tress; Yellow Fringeless Orchid; Spagnum (Beakrush Series); Nodding Nixie; Texas Bartonia; Sweetbay (Magnolia Series); Louisiana Squarehead; Shortleaf-Oak Forests; Loblolly-Oak Forests; Hardwood Forests; Southern Ladyslipper; Beech (White Oak Series); Bobwhite Quail (for Tallgrass Prairie); Little Bluestem (Indiangrass) (for Tallgrass

Prairie); Neotropical Migrants (Yellow-throated Vireo, Wood Thrush, Acadian Flycatcher, and others); Neches River Rose Mallow; Bottomland Hardwood Forests; Snags; Whitetail Deer; Eastern Wild Turkey; Gray Squirrel; Fox Squirrel; Yellow Breasted Chat; Pileated Woodpecker; Largemouth Bass; Sunfish (Bluegill and Redear); Channel Catfish; Paddlefish; Scaly Sand Darter; Sabine Shiner; Dusky Darter; and Stonefly Guild. Gov't Ex. 243A, 1996 FEIS, at 103; Gov't Ex. 243A, 1996 LRMP, at 306-07.

7. The Texas Parks & Wildlife Department ("TPWD") collects population data on and monitors the Bald Eagle and major game species. The TPWD provides this data to the Forest Service in the form of a report. R. 134/5 to 138/19. The TPWD report does not enable the Forest Service to determine the effects of even-aged management on soil, watershed, fish, wildlife, recreation, esthetics, or timber. R. 139/15-22.

8. The Forest Service collects population data and tracks population trends on fish, including the aquatic MIS. R. 1346/9 to 1351/19, 1352/17-21, 1359/23 to 1363/16, 1367/5 to 1369/10, 1386/16 to 1389/16; Gov't Exs. 62, 65, 117, 122, 125, 126, 155, and 178. This inventorying and monitoring, however, is not complete or current for all areas of the National Forests in Texas. R. 653/22 to 654/15, 1351/14 to 1352/21, 1366/18-24, 1387/21 to 1389/6.

9. At trial and in its on-the-ground management, the Forest Service has taken the position that collection of population data on MIS is not "practical" because of the number of acres (approximately 670,000) the Forest Service is required to manage. R. 1314/21-25, 1325/12-14.

Accordingly, the Forest Service does not collect population data on some MIS. The Forest Service instead: (1) provides habitat for the particular species, (2) determines whether there is an "occurrence" of that species, and then (3) "assumes" that the population is sufficiently distributed. R. 1312/22 to 1316/15. For example, the Forest Service does not know the population of the Pileated Woodpecker, a MIS under the 1987 and 1996 LRMPs. R. 1083/3-13.

10. The Forest Service's planning documents, however, require collection of population data to inventory and monitor MIS.

11. The Forest Service's 1987 FEIS, which is referenced and incorporated by the 1987 LRMP's MIS provisions, states:

> A final important requirement of the regulations is that population trends of the management indicator species will be monitored during implementation of the Forest Plan, and relationships to habitat changes determined. This then will become the feedback mechanism that will indicate the degree to which wildlife and fish goals are being met and whether or not adjustment of the Forest Plan is necessary.

Gov't Ex. 15, 1987 FEIS, at D-4; Gov't Ex. 15, 1987 LRMP, at IV-33.

12. The Forest Service's 1992 Five Year Review states:

A method that has received much attention by natural resource managers in recent years is computer simulation or modeling to predict the effects of certain management practices on wildlife. This technique has been developed for many areas managed by the [Forest Service]. The habitat capability concept, or HABCAP, is a computer generated model that utilizes habitat (Forest) management and condition to assess the capability of the Forest (habitat) to support certain species that require a specified and readily definable Forest type and age class.

** *Important Note*: HABCAP does not or should not be used to derive wildlife target projections, populations, or estimates. Many other factors effect populations that are not considered within HABCAP. HABCAP merely serves to assess the potential for a specific population based on habitat availability in an area. The value of actual population monitoring for effectiveness or validation of assumptions in land management cannot be stressed enough as to its importance in the overall [management indicator] process.

The HABCAP model is based on the Forest timber stand information (CISC) which exists for all managed stands. . . . On [the National Forests in Texas], some HABCAP values have been used that were developed on the Chatahoochee-Oconee. This information has limited reliability for east Texas.

Gov't Ex. 19, 1992 Five Year Review, at 2-80 (emphasis in original).

13. Noting the limitations of hypothetical models of habitat capability, the Forest Service's planning for the collection of population data of MIS is carried forward in the 1996 LRMP. Gov't Ex. 243A, 1996 LRMP, at 296, 300, 306-07, G-2. The 1996 LRMP provides: "Since the 1987 Plan, direct population monitoring has been limited to endangered and threatened species and major game species, through cooperation with the Texas Parks and Wildlife Department. Models have been developed for some management indicators to evaluate habitat on certain areas of the forest; *but these track capability rather than presence.*" Gov't Ex. 243A, 1996 FEIS, at F-1 to F-2 (emphasis supplied).

14. At least one of the models being used to assess habitat capability of MIS is HABCAP. Gov't Ex. 20, at 15-16; Gov't Ex. 21, at 37-38; Gov't Ex. 22, at 29-30. HABCAP detects trends in habitat capability but not populations or population trends. Gov't Ex. 22, at 29-30; Gov't Ex. 19, 1992 Five Year Review, at 2-80.

15. Because the Forest Service is not collecting population data for the MIS, the Forest Service cannot evaluate diversity, particularly in terms of animal and plant species.

16. The 1987 and 1996 LRMPs contemplate some site-specific collection of data for purposes of inventorying and monitoring. Gov't Ex. 15, 1987 LRMP, at IV-33; Gov't Ex. 243A, 1996 LRMP, at 300.

17. The Forest Service is not adequately inventorying or monitoring: (1) populations of some wildlife MIS; (2) diversity in terms of its prior and present condition; and (3) its management activities as to whether it is meeting objectives and adhering to management standards and guidelines.

18. The Forest Service's failure to adequately inventory and monitor may be causing permanent and substantial damage to the productivity of the land. Without adequate inventorying and monitoring, the Forest Service cannot determine the effects of its management activities on the forest resources.

Conclusions of Law and Analysis

The foundation of public land and resource planning is "gathering data in order to establish an inventory of commodity and noncommodity resources." WILKINSON & ANDERSON, *supra*, at 10. While a LRMP (which allocates competing forest resources) is implemented, performance is monitored. *Id.* Sections 1604(g)(2)(B) and (g)(3)(C) of the NFMA provide:

> (g) Promulgation of regulations for development and revision of plans; environmental considerations; resource management guidelines; guidelines for land management plans. As soon as practicable, . . . the Secretary shall . . . promulgate regulations, under the principles of the Multiple-Use Sustained-Yield Act of 1960, that set out the process for the development

> and revision of the land management plans, and the guidelines and standards prescribed by this subsection. The regulations shall include, but not be limited to--
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> (2) specifying guidelines which--
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> (B) provide for obtaining inventory data on the various renewable resources, and soil and water, including pertinent maps, graphic material, and explanatory aids . . . .
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> * * *
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> (3) specifying guidelines for land management plans developed to achieve the goals of the Program which--
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> (C) insure research on and (based on continuous monitoring and assessment in the field) evaluation of the effects of each management system to the end that it will not produce substantial and permanent impairment of the productivity of the land . . . .

16 U.S.C. § 1604(g)(2)(B), (g)(3)(C).

Pursuant to the NFMA, the Secretary of Agriculture promulgated regulations that require inventorying and monitoring on the National Forests. Sections 219.12(d) and (k) of the regulations provide:

> (d) *Inventory data and information collection.* Each Forest Supervisor shall obtain and keep current inventory data appropriate for planning

and managing the resources under his or her administrative jurisdiction. The Supervisor will assure that the interdisciplinary team has access to the best available data. This may require that special inventories or studies be prepared. The interdisciplinary team shall collect, assemble, and use data, maps, graphic material, and explanatory aids, of a kind, character, and quality, and to the detail appropriate for the management decisions to be made. Data and information needs may vary as planning problems develop from identification of public issues, management concerns, and resource use and development opportunities. Data shall be stored for ready retrieval and comparison and periodically shall be evaluated for accuracy and effectiveness. The interdisciplinary team will use common data definitions and standards established by the Chief of the Forest Service to assure uniformity of information between all planning levels. As information is recorded, it shall be applied in any subsequent planning process. Information developed according to common data definitions and standards shall be used in the preparation of the 1990, and subsequent RPA Assessments and RPA Programs.

* * *

(k) *Monitoring and evaluation*. At intervals established in the plan, implementation shall be evaluated on a sample basis to determine how well objectives have been met and how closely

management standards and guidelines have been applied. Based upon this evaluation, the interdisciplinary team shall recommend to the Forest Supervisor such changes in management direction, revisions, or amendments to the forest plan as are deemed necessary. Monitoring requirements identified in the forest plan shall provide for--

(1) A quantitative estimate of performance comparing outputs and services with those projected by the forest plan;

(2) Documentation of the measured prescriptions and effects, including significant changes in productivity of the land; and

(3) Documentation of costs associated with carrying out the planned management prescriptions as compared with costs estimated in the forest plan.

(4) A description of the following monitoring activities:

(i) The actions, effects, or resources to be measured, and the frequency of measurements;

(ii) Expected precision and reliability of the monitoring process; and

(iii) The time when evaluation will be reported.

(5) A determination of compliance with the following standards:

(i) Lands are adequately restocked as specified

> in the forest plan;[15]
> (ii) Lands identified as not suited for timber production are examined at least every 10 years to determine if they have become suited; and that, if determined suited, such lands are returned to timber production;
> (iii) Maximum size limits for harvest areas are evaluated to determine whether such size limits should be continued; and
> (iv) Destructive insects and disease organisms do not increase to potentially damaging levels following management activities.

36 C.F.R. § 219.12(d), (k). "[F]orest plan[s] shall contain . . . monitoring and evaluation requirements that will provide a basis for a periodic determination and evaluation of the effects of management practices." 36 C.F.R. § 219.11(d). In conducting inventorying and monitoring, the Forest Service is required to continually identify research needs:

> Research needs for management of the National Forest System shall be identified during planning and periodically reviewed during evaluation of implemented plans. Particular attention should be given to research needs identified during the monitoring and

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[15] "When trees are cut to achieve timber production objectives, the cuttings shall be made in such a way as to assure that the technology and knowledge exists to adequately restock the lands within 5 years after final harvest. Research and experience shall be the basis for determining whether the harvest and regeneration practices planned can be expected to result in adequate restocking." 36 C.F.R. § 219.27(c)(3).

> evaluation described in § 219.12(k). These identified needs shall be included in formulating overall research programs and plans which involve private as well as public forest and rangelands.

36 C.F.R. § 219.28(a); *see also Oregon Natural Resources Council v. Lowe*, 836 F. Supp. 727, 734 (D. Or. 1993) ("The regulations contemplate that [the Forest Service] would continue to conduct research and update inventories."), *aff'd*, 109 F.3d 521 (9th Cir. 1997).

The dominant method of inventorying and monitoring the forest resources is selecting, inventorying, and monitoring MIS. The viability of fish and wildlife on the forest land is a sound indicator of not only the health of all animal and plant life in the forest but the availability of all forest resources. Sections 219.19(a)(1), (a)(2), (a)(5), and (a)(6) of the regulations provide:

> Fish and wildlife habitat shall be managed to maintain viable populations of existing native and desired non-native vertebrate species in the planning area. For planning purposes, a viable population shall be regarded as one which has the estimated numbers and distribution of reproductive individuals to insure its continued existence is well distributed in the planning area. In order to insure that viable populations will be maintained, habitat must be provided to support, at least, a minimum number of reproductive individuals and that habitat must be well distributed so that those individuals

can interact with others in the planning area.

(a) Each alternative shall establish objectives for the maintenance and improvement of habitat for management indicator species selected under paragraph (g)(1) [read as (a)(1)] of this section, to the degree consistent with overall multiple use objectives of the alternative. To meet this goal, management planning for the fish and wildlife resource shall meet the requirements set forth in paragraphs (a)(1) through (a)(7) of this section. (1) In order to estimate the effects of each alternative on fish and wildlife populations, certain vertebrate and/or invertebrate species present in the area shall be identified and selected as management indicator species and the reasons for their selection will be stated. These species shall be selected because their population changes are believed to indicate the effects of management activities. In the selection of management indicator species, the following categories shall be represented where appropriate: [1] Endangered and threatened plant and animal species identified on State and Federal lists for the planning area; [2] species with special habitat needs that may be influenced significantly by planned management programs; [3] species commonly hunted, fished, or trapped; [4] non-game species of special interest; and [5] additional plant or animal species selected because their population changes are believed to indicate the

> effects of management activities on other species of selected major biological communities or on water quality. On the basis of available scientific information, the interdisciplinary team shall estimate the effects of changes in vegetation type, timber age classes, community composition, rotation age, and year-long suitability of habitat related to mobility of management indicator species. Where appropriate, measures to mitigate adverse effects shall be prescribed.
> (2) Planning alternatives shall be stated and evaluated in terms of both amount and quality of habitat and of animal population trends of the management indicator species.
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> * * *
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> (5) The effects of pest and fire management on fish and wildlife populations shall be considered.
> (6) Population trends of the management indicator species will be monitored and relationships to habitat changes determined. This monitoring will be done in cooperation with State fish and wildlife agencies, to the extent practicable.

36 C.F.R. § 219.19(a)(1), (a)(2), (a)(5), (a)(6).[16]

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[16] "All management prescriptions shall . . . provide for adequate fish and wildlife habitat to maintain viable populations of existing native vertebrate species and provide that habitat for species chosen under § 219.19 is maintained and improved to the degree consistent with multiple-use objectives established in the

"[MIS] are chosen as monitoring proxies for a number of other plant and animal species." *Krichbaum v. Kelley,* 844 F. Supp. 1107, 1114 (W.D. Va. 1994), *aff'd*, 61 F.3d 900 (4th Cir. 1995). Section 219.19 primarily focuses on vertebrate species of fish and wildlife, but the regulations "assume that providing a full diversity of vertebrates will also maintain diversity of the invertebrates and plants." WILKINSON & ANDERSON, *supra*, at 273. Because MIS are merely a proxy for other animals and plants, the proper selection of MIS is vital. Wilkinson and Anderson explain:

> [P]lanners must choose MIS that adequately reflect the impact of management on wildlife habitats. The regulations require that MIS "shall be selected because their population changes are believed to indicate the effects of management activities." Thus, planners must justify their MIS choices based upon the extent to which those selections will ensure that adequate habitat is maintained for all existing vertebrate species. Since the Forest Service is primarily responsible for habitat maintenance, MIS proxy species should represent all major habitat types, including water habitat.

Id. at 302-03.

Once MIS are selected, they must be inventoried and monitored. Although the Forest Service is not required to maintain a detailed list of every plant and animal species in the management area, the Forest Service is required to

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plan. . . ." 36 C.F.R. § 219.27(a)(6).

inventory and monitor by collecting population data of MIS. 36 C.F.R. § 219.19(a)(1), (a)(2), (a)(6); *see also Swanson v. United States Forest Service,* 87 F.3d 339, 344 (9th Cir. 1996); *Seattle Audubon Soc'y v. Moseley,* 80 F.3d 1401, 1404 (9th Cir. 1996); *Sierra Club v. United States Forest Service,* 878 F. Supp. 1295, 1317 (D.S.D. 1993), *aff'd,* 46 F.3d 835 (8th Cir. 1995); *Krichbaum v. Kelley,* 844 F. Supp. at 1114; *Oregon Natural Resources Council v. Lowe,* 836 F. Supp. at 734. Wilkinson and Anderson explain the requirement of inventorying and monitoring MIS populations:

> The objectives [of maintaining and improving habitat] must be stated in terms of quantity and quality of habitat and population trends of the MIS. Population objectives must ensure a viable and well-distributed population, one that is self-sustaining throughout the national forest. . . . Monitoring MIS populations is essential to verify and, if necessary, modify the forest plan's assumptions about the effects of timber harvesting and other management activities on wildlife. . . . In order to meet the monitoring requirement, planners will need to obtain adequate inventories of wildlife populations and distribution. . . . [The Committee of Scientists] explained, "No plan is better than the resource inventory data that support it. Each forest plan should be based on sound, detailed inventories of soils, vegetation, water resources, wildlife, and the other resources to be managed." . . . [T]he NFMA regulations have significantly broadened and enhanced the role of wildlife planning in the

> Forest Service. The central goal is to provide sufficient habitat to sustain viable and well-distributed wildlife populations in each national forest. Realistically, this goal can only be achieved by carefully selecting and monitoring management indicator species and by collecting adequate inventory data.

WILKINSON & ANDERSON, *supra*, at 303-05 (internal citations omitted).

The unambiguous language of the MIS regulations requires collection of population data. 36 C.F.R. § 219.19(a)(1) ("In order to estimate the effects of each alternative on fish and wildlife *populations*. [MIS] . . . shall be identified and selected . . . . These species shall be selected because their *population changes* are believed to indicate the effects of management activities. In the selection of management indicator species, the following categories shall be represented where appropriate: . . . additional plant or animal species selected because their *population changes* are believed to indicate the effects of management activities.") (emphasis added); 36 C.F.R. § 219.19(a)(2) ("Planning alternatives shall be stated and evaluated in terms of both amount and quality of habitat and of animal *population trends* of the management indicator species.") (emphasis added); 36 C.F.R. § 219.19(a)(6) ("*Population trends of the management indicator species will be monitored* and relationships to habitat changes determined.") (emphasis added). These regulations requiring the collection of population data are consistent with the NFMA that requires collection of inventory data. 16 U.S.C. § 1604(g)(2)(B) ("The regulations shall include . . . specifying guidelines

which . . . provide for obtaining inventory data on the various renewable resources, and soil and water, including pertinent maps, graphic material, and explanatory aids."). "The viability regulation [section 219.19] requires the agencies to look to species populations--not merely to habitat for hypothetical populations." *Seattle Audubon Soc'y v. Lyons,* 871 F. Supp. 1291, 1316 (W.D. Wash. 1994), *aff'd sub nom. Seattle Audubon Soc'y v. Moseley,* 80 F.3d 1401.

The Forest Service interprets section 219.19 to require only habitat for MIS rather than collection of population data on the MIS.[17] In the context of analyzing whether the Forest

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[17] Federal Defendants offer the following interpretation of section 219.19:

> The substance of the duty in 219.19 goes to management of habitat to support viable populations vis-a-vis direct management of species populations themselves. At bottom, it requires providing an amount and distribution of habitat adequate to support the continued persistence of vertebrate species in the planning area, given the life history of the species, the current amount and distribution of its habitat, the amount and distribution of species' ranges within the planning area, and other reasonably foreseeable protective measures.
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> Thus, while the regulation calls for a certain amount of monitoring to be undertaken in assessing the status of species on a forest, 36 C.F.R. § 219.19(a)(6), individual species-specific assessments are not required. Rather, consistent with the principles of ecosystem management, the Forest Service may make use of assessments within one or more of the following categories: (1) species with habitat needs that are roughly the same; (2) a group of species generally thought to

Service must collect population data for a site-specific, environmental impact statement ("EIS") on timber sales, one court has determined that merely providing for MIS habitat is sufficient. *Inland Empire Public Lands Council v. United States Forest Service,* 88 F.3d 754, 760-63 (9th Cir. 1996) ("*Inland Empire*"). The court determined that analyzing and providing for a hypothetical habitat would satisfy section 219.19, and that failing to collect data was not arbitrary or capricious. *Id.* at 761. The court reasoned that the Forest Service's central assumption was reasonable, *i.e.*, that "maintaining the acreage of habitat necessary for survival would in fact assure [sic] a species' survival." *Id.*

The *Inland Empire* decision does not support the Forest Service's interpretation. The court was reviewing the Forest Service's compliance with section 219.19 in the context of preparing a one-time, site-specific EIS for timber sales. The court was not reviewing the Forest Service's on-the-ground compliance in managing the forest over the entire planning area. Moreover, on the evidentiary record before this court, the assumption that merely providing habitat will ensure viable populations of MIS and relieve the Forest Service of collecting population data is not reasonable.

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perform the same or similar ecosystem functions; and/or (3) the continued integrity and function of ecosystem(s) in which a species is found. Federal Defs.' Proposed Findings of Fact and Conclusions of Law at 95-96. In effect, the Forest Service believes that it can satisfy the requirements of 219.19 in three ways: (1) collect population data on MIS; (2) collect data on a community of various species, or (3) merely provide habitat for the MIS on the assumption that viable populations of MIS will survive.

Scientific analysis of the forest land requires making assumptions--but the scientific method requires testing and verification of those assumptions from time to time. Continually testing assumptions upon which forest management decisions are based is exactly what Congress had in mind when it required the Forest Service to collect inventory data. *See* 16 U.S.C. § § 1604(g)(2)(B), (g)(3)(C). Likewise, in promulgating regulations to determine the effects of management activities, the Secretary of Agriculture required the Forest Service to collect population data on MIS. *See 36 C.F.R. § 219.19*. Population data are to be collected on a "sample basis" at "intervals," and these data are to be "current." 36 C.F.R. § 219.12(d), (k). Without actually collecting population data of MIS, the Forest Service cannot determine whether it is, in reality, maintaining viable populations of MIS.

The court determines that the Forest Service's interpretation of section 219.19 is plainly erroneous and inconsistent with the regulation itself and section 1604(g)(2)(B). *See Robertson v. Methow Valley Citizens Council,* 490 U.S. at 359. The Forest Service is correct in concluding that section 219.19 requires the maintenance of habitat to support "viable populations of existing native and desired non-native vertebrate species." But, the Forest Service ignores the clear statutory and regulatory commands to simultaneously verify, through collecting population data, that MIS are surviving in those habitats. The Forest Service must collect inventory data to evaluate its management activities--not simply assume that its management activities are sound based on the provision of a hypothetical habitat. In developing inventorying and monitoring requirements, Congress, the Secretary of Agriculture, and the Committee of Scientists

clearly intended that the Forest Service collect data to determine the actual effects of various forest management decisions. In fact, the Forest Service carries this intent into its own planning documents. Now that the Forest Service has failed to comply on-the-ground with the NFMA, regulations, and its 1987 and 1996 LRMPs in collecting population data on MIS, the Forest Service seeks to put a new gloss on the NFMA and related inventorying and monitoring regulations. This new gloss, however, is plainly erroneous and inconsistent with the law, and therefore this court is not bound by the Forest Service's interpretation proposed for purposes of trial.

With respect to monitoring and inventorying diversity, section 219.26 of the regulations provides:

> Forest planning shall provide for diversity of plant and animal communities and tree species consistent with the overall multiple-use objectives of the planning area. Such diversity shall be considered throughout the planning process. *Inventories shall include quantitative data making possible the evaluation of diversity in terms of its prior and present condition*. For each planning alternative, the interdisciplinary team shall consider how diversity will be affected by various mixes of resource outputs and uses, including proposed management practices. (Refer to § 219.27(g).)

36 C.F.R. § 219.26 (emphasis added). Noting the vagueness of the term "diversity," one court has held that the MIS approach combined with a site-specific, biological

evaluation before a timber sale was sufficient to satisfy the inventory requirement of section 219.26. *Krichbaum v. Kelley,* 844 F. Supp. at 1114. Inventorying under this interpretation for maintaining "diversity of plant and animal communities and tree species," however, may not be sufficient for two reasons. First, the MIS approach is primarily concerned with maintaining viable populations of fish and wildlife species and does not require any inventory of tree species. Second, a site-specific, biological evaluation is not sufficient to evaluate "diversity in terms of its prior and present condition." If, however, the Forest Service adequately inventories and monitors properly selected MIS, tree species, and plant species (if not adequately represented in the MIS), then the Forest Service would be acting within its discretion in evaluating diversity.

Plaintiffs argue that the Forest Service is required to conduct site-specific inventorying and monitoring before and after timber harvesting. While this may be an optimal approach to evaluating management activities, the NFMA and regulations do not explicitly require this method. The Forest Service has discretion to use this site-specific method if appropriate, but the regulations require inventorying and monitoring only at "intervals" and on a "sample basis to determine how well objectives have been met and how closely management standards and guidelines have been applied." 36 C.F.R. § 219.12(k). The Forest Service has broad discretion to determine the appropriate interval to inventory and monitor the forest resources, but that interval must be rational. *See Louisiana ex rel. Guste v. Verity,* 853 F.2d at 329 (noting that a court must hold the Forest Service to "certain minimal standards of rationality"). A rational interval would be one that permits the Forest Service to achieve the objectives of

inventorying and monitoring, *i.e.*, protect forest resources and guide forest management planning.

In sum, the NFMA and regulations create five broad requirements for inventorying and monitoring. First, the Forest Service must inventory and monitor the forest resources (*i.e.*, fish and wildlife, soil, watershed, recreation, esthetic, and timber). In inventorying and monitoring the forest resources, the Forest Service must evaluate the effects of management practices on the resources. Second, with respect to the fish and wildlife resources, the Forest Service must select, inventory, and monitor MIS populations. Third, the Forest Service must collect inventory data that permits evaluation of diversity in terms of its prior and present condition. Fourth; the Forest Service must inventory and monitor to determine whether it is meeting objectives and adhering to management standards and guidelines. Fifth, the Forest Service must ensure research to evaluate the effects of management practices. The Forest Service, of course, has discretion in choosing its methods of inventorying and monitoring. *See Sierra Club v. Espy,* 38 F.3d at 800; *Sierra Club v. Robertson,* 810 F. Supp. 1021, 1029 (W.D. Ark. 1992) (noting that the Forest Service has considerable discretion in inventorying), *aff'd,* 28 F.3d 753 (8th Cir. 1994). This discretion, however, must be rational and within the boundaries of the NFMA and regulations. *See Sierra Club v. Espy,* 38 F.3d at 800-01.

Fish and Wildlife

Plaintiffs have not carried their burden of showing that the Forest. Service's selection of MIS was arbitrary or capricious under the 1987 or 1996 LRMPs. Plaintiffs argue

that, under the 1987 LRMP, the Forest Service's MIS selection favored early-successional species over mid- or late-successional species, and that this selection distorted the Forest Service's evaluation of the effects of even-aged management on species population. Plaintiffs, however, did not produce sufficient evidence that the Forest Service failed to select MIS that adequately indicated the effects of management activities. The Forest Service has broad discretion in this area. *See* 36 C.F.R. § 219.19(a)(1) ("In the selection of management indicator species, the following categories shall be represented *where appropriate.*") (emphasis added).

Plaintiffs, however, have carried their burden of showing that the Forest Service has violated the MIS regulations because the Forest Service does not collect population data on MIS except for the Red-Cockaded Woodpecker, Bald Eagle, major game species, and fish.[18] The Forest Service's 1996 LRMP, which incorporates the 1996 FEIS, admits this deficiency: "Since the 1987 Plan, direct population monitoring has been limited to endangered and threatened species and major game species, through cooperation with the Texas Parks and Wildlife Department.

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[18] Although the Forest Service's inventorying and monitoring of the fish MIS is not complete or current, the Forest Service is in the process of collecting more data. The Forest Service has set goals for collecting data on the fish MIS for all of the four National Forests in Texas, including all the streams. Therefore, on the evidentiary record before the court, the Forest Service appears to be making progress on-the-ground toward maintaining current data on the fish MIS populations. Accordingly, the Forest Service's actions are not arbitrary and capricious, and thus the Federal Defendants have not violated the inventorying and monitoring requirements with respect to the fish resource.

Models have been developed for some management indicators to evaluate habitat on certain areas of the forest; ***but these track capability rather than presence***." Gov't Ex. 243A, 1996 FEIS, at F-1 to F-2 (emphasis supplied). Without sufficient MIS population data, the Forest Service cannot determine the effects of its management activities on the wildlife resource.

Whatever Forest Service planning documents prescribe with respect to collection of MIS population data and inventorying the wildlife resource, the evidence shows that on-the-ground the Forest Service is neither collecting MIS population data nor otherwise inventorying the wildlife resource. The Forest Service has stepped outside its discretion and acted arbitrarily and capriciously. Accordingly, the court determines that Federal Defendants have violated sections 1604(g)(2)(B) and (g)(3)(C) of the NFMA and sections 219.11(d); 219.12(d), (k); and 219.19(a)(1), (a)(2), (a)(5), and (a)(6) of the regulations.

Soil, Watershed, Recreation, and Timber

With respect to the soil, watershed, recreation, and timber resources, Plaintiffs have not carried their burden of showing that the Forest Service has failed to inventory and monitor these resources. While Plaintiffs' evidence shows a number of limitations in the Forest Service's data and methods used to inventory and monitor these resources, the Plaintiffs' evidence is not sufficient to persuade the court that the Forest Service's actions have been arbitrary and capricious. For example, with respect to the soil resource, the Forest Service does not make the site-specific, field inspections required to obtain the information necessary to use the Universal Soil Loss Equation method of measuring

erosion. R. 1270/5-17. This evidence, however, does not preclude the possibility that the Forest Service may have other methods of monitoring soil erosion. Plaintiffs have failed to show that the Forest Service is not employing other supplementary methods to monitor the soil resource. Accordingly, the court determines that, on this evidentiary record, Federal Defendants have not violated the inventorying and monitoring requirements with respect to the resources of soil, watershed, recreation, and timber.

Diversity

Because the Forest Service is not collecting population data for some MIS (*i.e.*, wildlife), the Forest Service cannot evaluate diversity in terms of animal and plant species. Before diversity can be evaluated in terms of its prior and present condition, the Forest Service must establish baseline data for comparison purposes. Once adequate baseline data are collected, the Forest Service can again collect more data and begin to evaluate diversity, particularly with respect to the effects of management activities. The Forest Service is inventorying tree species by collecting data on stand age and species type. But, without collecting population data on the MIS, the Forest Service has no way to evaluate diversity of plant and animal species in terms of their existence and distribution. "Diversity, of course, can exist only if individual species survive." *Seattle Audubon Soc'y v. Lyons,* 871 F. Supp. at 1315. Therefore, by not collecting population data on the MIS (which is necessary to evaluate diversity), the Forest Service has stepped outside its discretion and acted arbitrarily and capriciously. Accordingly, the court determines that Federal Defendants have violated section 219.26 of the regulations.

Meeting Objectives and Adhering to Standards and Guidelines

"At intervals established in the plan, implementation shall be evaluated on a sample basis to determine how well objectives[19] have been met and how closely management standards and guidelines[20] have been applied." 36 C.F.R. § 219.12(k). Because the Forest Service is not collecting population data for the wildlife MIS, the Forest Service cannot determine how well objectives have been met and how closely management standards and guidelines have been applied. For example, with respect to meeting objectives, the 1996 LRMP states the objective: "Develop habitat for

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[19] The regulations define "objective" as: "A concise, time-specific statement of measurable planned results that respond to pre-established goals. An objective forms the basis for further planning to define the precise steps to be taken and the resources to be used in achieving identified goals." 36 C.F.R. § 219.3. The regulations define "goal" as: "A concise statement that describes a desired condition to be achieved sometime in the future. It is normally expressed in broad, general terms and is timeless in that it has no specific date by which it is to be completed. Goal statements form the principal basis from which objectives are developed." *Id.*

[20] The 1987 LRMP provides an explanation of "standards and guidelines":

> Management requirements to achieve goals and objectives are referred to as standards and guidelines (S&G's). These state the bounds of constraints within which management practices will be performed. Forest-wide standards and guidelines apply to all management areas and possibly to all alternatives considered. Some standards and guidelines apply only to a particular management area. Gov't Ex. 15, 1987 LRMP, at IV-31.

threatened, endangered, or sensitive species not provided on privately owned forests and grasslands, while providing populations of other species that occur within Forest and Grassland successional stages." Gov't Ex. 243A, 1996 LRMP, at 45. Because the Forest Service is not collecting sufficient MIS population data, the Forest Service is not able to determine whether it is meeting its objective of providing sufficient populations of animal and plant species. Similarly, the Forest Service will not know whether it is closely adhering to the standards and guidelines that are used to achieve the related objectives and goals, *i.e*, those standards and guidelines related to providing for maintaining viable populations of existing native and desired non-native vertebrate species in the planning area. Accordingly, the Federal Defendants have violated section 219.12(k) of the regulations.

Research

With respect to the Forest Service conducting research on its management activities, Plaintiffs did not carry their burden of showing that the Forest Service does not ensure research to evaluate the effects of management practices. In fact, Plaintiffs neither presented any appreciable evidence nor requested any findings of fact on this issue. Accordingly, the court determines that Federal Defendants have not violated section 1604(g)(3)(C) of the NFMA (with respect to the research requirement only) or section 219.28(a) of the regulations with respect to research.

Conclusion

The Forest Service has not adequately inventoried and

monitored for wildlife MIS, diversity, and whether it is meeting objectives and adhering to standards and guidelines. The Forest Service's failure to adequately inventory and monitor may be causing permanent and substantial damage to the productivity of the land. Sufficient inventorying and monitoring of forest resources is vital to making sound, forest management decisions and ultimately protecting the forest resources from permanent impairment. Apparently, inventorying and monitoring is an area of forest management that is often neglected. In advising on the promulgation of the regulations under the NFMA, the Committee of Scientists noted that the Forest Service has a long history of failing to collect inventory data necessary to make sound decisions about forest management. Wilkinson and Anderson explain:

> In 1979 the Committee of Scientists felt that current resource inventory data would be inadequate to support judgments made in NFMA plans:
> Unfortunately, it does not follow that truly adequate resource data will be available to support the development of every plan. In many cases, inventory data are too fragmentary or insufficiently detailed to allow firm judgments in developing management programs of the complexity demanded by RPA/NFMA. In other cases, data on certain organisms, resources, or management effects have simply never been gathered.
> The Committee's prognosis for the first round of plans was not hopeful: "In practice, what this means is that the data base for a number of plans is likely to be marginally adequate or

> even shaky." Six years later [1985] it remains evident that there is not sufficient data to justify all wildlife management decisions. The plans will have to be considered with sensitivity both to the central role of good inventories in resource planning and the scope of the task, as evidenced by the Committee's words in 1979: "Even if a Federal Government-wide crash program of data acquisition and storage were to begin tomorrow, it would not provide adequate data in time to be of much value in developing the first forest plans . . . . [T]he Forest Service cannot remedy decades of national indifference toward basic resource data in 5 years."

WILKINSON & ANDERSON, *supra*, at 305 (internal citations omitted).

Plaintiffs may have been able to carry their burden on the issues of ensuring diversity and protecting the key resource of wildlife had the Forest Service collected adequate inventory data and conducted sufficient monitoring. It is nearly impossible to determine with any legal certainty whether the Forest Service is ensuring diversity and protecting the wildlife resource unless the Forest Service complies with the inventorying and monitoring requirements of the NFMA. Once the Forest Service comes into compliance with the inventorying and monitoring requirements, the Forest Service and other interested parties will have a better idea of whether the Forest Service's planning decisions and activities on-the-ground are within its sound discretion and thus in compliance with the NFMA and regulations.

DECLARATORY AND INJUNCTIVE RELIEF

The federal declaratory judgment statute provides: "In a case of actual controversy within its jurisdiction . . . any court of the United States . . . may declare the rights and other legal relations of any interested party seeking such declaration, whether or not further relief is or could be sought." Declaratory Judgment Act, 28 U.S.C. § 2201(a). "The existence of another adequate remedy does not preclude a judgment for declaratory relief in cases where it is appropriate." FED. R. CIV. P. 57. "The existence or non-existence of any right, duty, power, liability, privilege, disability, or immunity[,] or of any fact upon which such legal relations depend, or of a status, may be declared. The petitioner must have a practical interest in the declaration sought. . . ." FED. R. CIV. P. 57 Advisory Committee's Note. The declaratory-relief plaintiff bears the burden of proving the requirements for a declaratory judgment, *i.e.*, existence of a dispute within federal-court subject matter jurisdiction. *State of Texas v. West Publishing Co.*, 882 F.2d 171, 175 (5th Cir. 1989). "The Declaratory Judgment Act . . . . gave the federal courts competence to make a declaration of rights; it did not impose a duty to do so." *Public Affairs Assocs. v. Rickover,* 369 U.S. 111, 112, 82 S. Ct. 580, 581, 7 L. Ed. 2d 604 (1962). The district court's decision to grant declaratory relief is discretionary. *Magnolia Marine Transp. Co. v. Laplace Towing Corp.*, 964 F.2d 1571, 1581 (5th Cir. 1992). A declaration is appropriate in this action and would serve the purposes of the Declaratory Judgment Act.

Accordingly, the court determines and declares: Under section 706(2)(A) of the APA, the Federal Defendants'

actions or failure to act have been "arbitrary, capricious, an abuse of discretion, [and] otherwise not in accordance with law," *i.e*, the NFMA and regulations. Specifically, Federal Defendants have neither protected the key resources of soil and watershed nor adequately inventoried and monitored for wildlife, diversity, and whether the Forest Service is meeting objectives and adhering to standards and guidelines. Federal Defendants have violated and are continuing to violate:

> (1) with respect to protection of the soil resource, sections 1604(g)(3)(E)(i) and (g)(3)(F)(v) of the NFMA and sections 219.27(a)(1), (b)(5), (c)(6), and (f) of the regulations;
> (2) with respect to protection of the watershed resource, sections 1604(g)(3)(E)(i), (g)(3)(E)(iii), and (g)(3)(F)(v) of the NFMA and sections 219.27(a)(1), (a)(4), (b)(5), (c)(6), (e), and (f) of the regulations;
> (3) with respect to inventorying and monitoring for wildlife, sections 1604(g)(2)(B) and (g)(3)(C) of the NFMA and sections 219.11(d); 219.12(d), (k); and 219.19(a)(1), (a)(2), (a)(5), and (a)(6) of the regulations;
> (4) with respect to inventorying and monitoring for diversity, section 219.26 of the regulations; and
> (5) with respect to inventorying and monitoring for whether the Forest Service is meeting objectives and adhering to standards and guidelines, section 219.12(k) of the regulations.

Because Plaintiffs did not carry their burden, the court determines that the Federal Defendants are not in violation of the NFMA and regulations with respect to the issues of (1) ensuring diversity; (2) protecting the key resources of fish, wildlife, recreation (including esthetic), and timber; (3) inventorying and monitoring of fish, soil, watershed, recreation (including esthetic), and timber; and (4) adequate research.

The Administrative Procedure Act provides an injunctive remedy for "agency action unlawfully withheld or unreasonably delayed . . . [or] found to be . . . arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law . . . . " 5 U.S.C. § 706(1), (2)(A); *see National Wildlife Fed'n v. Espy,* 45 F.3d 1337, 1343 (9th *Cir. 1995); Hondros v. United States Civil Service Comm'n,* 720 F.2d 278, 298 (3d Cir. 1983) (citing cases from the Tenth and District of Columbia Circuits for the proposition that "section 706(1) is a source of injunctive relief to remedy an arbitrary or capricious delay or denial of agency action"). Section 706, however, does not authorize monetary damages. *Westlands Water Dist. v. Firebaugh Canal,* 10 F.3d 667, 673 (9th Cir. 1993). "Further necessary or proper relief based on a declaratory judgment or decree may be granted, after reasonable notice and hearing, against any adverse party whose rights have been determined by such judgment." 28 U.S.C. § 2202. A declaratory judgment can be used as a predicate to further relief, including an injunction. *Powell v. McCormack,* 395 U.S. 486, 499, 89 S. Ct. 1944, 1952, 23 L. Ed. 2d 491 (1969).

An injunction is an equitable remedy--"not a remedy which issues as of course . . . or to restrain an act the

injurious consequences of which are merely trifling." *Weinberger v. Romero-Barcelo,* 456 U.S. 305, 311, 102 S. Ct. 1798, 1803, 72 L. Ed. 2d 91 (1982) (internal quotation marks and citations omitted). The language of section 706 of the APA is mandatory: "The reviewing court shall--(1) compel agency action unlawfully withheld or unreasonably delayed . . . ." 5 U.S.C. § 706. In determining whether to order injunctive relief under this provision, however, a court must exercise sound discretion because the remedy is extraordinary. *See Weinberger,* 456 U.S. at 312, 102 S.Ct. 15 1803; *Canal Authority of Florida v. Callaway,* 489 F.2d 567, 572 (5th Cir. 1974).

The standard for a permanent injunction is essentially the same as for a preliminary injunction with the exception that the plaintiff must show actual success on the merits rather than a likelihood of success. *Amoco Prod. Co. v. Village of Gambell,* 480 U.S. 531, 546 n.12, 107 S. Ct. 1396, 1404 n.12, 94 L. Ed. 2d 542 (1987). Thus, four elements are required for a permanent injunction: (1) actual success on the merits; (2) a substantial threat of irreparable injury to the plaintiff if the injunction is not granted; (3) the irreparable injury threatened to the plaintiff must outweigh the threatened injury of any injunction to the defendant; and (4) the granting of the permanent injunction must not disserve the public interest. *Cherokee Pump & Equip., Inc. v. Aurora Pump,* 38 F.3d 246, 249 (5th Cir. 1994); *Canal Authority of Florida v. Callaway,* 489 F.2d at 572. Plaintiffs having succeeded on the merits, the court turns to the remaining elements.

The second element requires a showing of a substantial threat of irreparable injury if the injunction is not granted. In making a showing of irreparable injury, the plaintiff should

also show an inadequate remedy at law. *Weinberger,* 456 U.S. at 312, 102 S.Ct. at 1803. The threat of irreparable injury must be imminent. *Humana, Inc. v. Jacobson,* 804 F.2d 1390, 1394 (5th Cir. 1986). Namely, the plaintiff must show "'there exists some cognizable danger of recurrent violation, something more than the mere possibility which serves to keep the case alive.'" *Shanks v. City of Dallas,* 752 F.2d 1092, 1097 (5th Cir. 1985) (quoting *United States v. W.T. Grant Co.,* 345 U.S. 629, 633, 73 S. Ct. 894, 897-98, 97 L. Ed. 1303 (1953)).

Plaintiffs have shown a substantial threat of irreparable injury if the injunction is not granted. Federal Defendants' past and continuing violations of the NFMA and regulations have caused and continue to cause irreparable injury to the soil and watershed resources. The continuing violations of the inventorying and monitoring requirements are also causing irreparable injury because population baselines of wildlife that could be established are forever lost as time passes and the Forest Service fails to collect data. The present failure to collect this data forecloses any possibility that the Forest Service can (1) ensure that viable populations of vertebrate species are well distributed, (2) evaluate diversity in its prior and present condition, and (3) determine whether the Forest Service is meeting objectives and adhering to standards and guidelines. These irreparable injuries to the forest resources likewise cause irreparable injury to the Plaintiffs' enjoyment of the forest resources.[21]

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[21] Plaintiffs do not have an adequate remedy at law. The APA does not provide for recovery of monetary damages, and the Forest Service's continuing noncompliance with the NFMA and regulations is causing irreparable injury to the forest land. This irreparable injury to the environment is an injury for which the law

Timber Intervenors argue: "It cannot be assumed that any NFMA violations that have occurred in the past would be repeated under the more stringent environmental standards in the [1996 LRMP]." Timber Intervenors' Closing Argument on the NFMA Issues at 27. Certainly, *past* violations and the substantial and permanent damage caused by those violations is an irreparable injury that cannot be cured by an injunction. Reoccurring violations, however, can be the subject of an injunction. Whatever the Forest Service's planning documents provide, the Forest Service must, in reality, comply with the NFMA and regulations on-the-ground. In reviewing the evidence, the court found a wide gap between what the Forest Service represents in its planning documents and what it actually does on-the-ground.

For example, the 1987 LRMP required the Forest Service to collect population data on all MIS, but at trial the Forest Service admitted that it did not collect population data because it was not "practical." Although the 1996 LRMP requires the collection of population data on some "management indicators," there are no guarantees in the Plan that ensure performance on-the-ground. Compliance with the law is not forth coming because at trial the Forest Service took the position that it did not have to collect population data but only provide for habitat capability through the use of a computer model. Another example of the gap between planning and performance is that despite the Forest Service's "planning" prohibition of cutting in streamside management zones for commercial purposes, substantial photographic evidence at trial showed that these areas were routinely

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does not provide an adequate remedy.

ignored, permitting cutting through the zone and the deposit of logging debris in the streams.

The third element requires a showing that the irreparable injury threatened to the plaintiff outweighs the threatened injury of an injunction to the defendant. The court determines that the irreparable injury to the environment and Plaintiffs far outweighs any harm caused by an injunction. Federal Defendants may lose revenue if the court enjoins the sale of timber contracts. Timber Intervenors' members may have to obtain another source of timber from private holdings or other National Forests if the court enjoins the sale of timber. These harms that an injunction may cause, however, are certainly outweighed by the permanent and grave harm to the forest land that is caused by the Forest Service's past and ongoing violations of the NFMA and regulations. The Supreme Court has stated: "Environmental injury, by its nature, can seldom be adequately remedied by money damages and is often permanent or at least of long duration, *i.e.*, irreparable. If such injury is sufficiently likely, therefore, the balance of harms will usually favor the issuance of an injunction to protect the environment." *Amoco Prod.*, 480 U.S. at 545, 107 S.Ct. at 1404.

The fourth element requires a showing that the granting of the permanent injunction must not disserve the public interest. The court is cognizant of the public's interest in a supply of timber from the National Forests in Texas and in the economic benefits associated with timber harvesting. The 1996 LRMP states: "The National Forests in Texas contain 5.3 percent of the approximately 11.6 million acres of timberland in East Texas; however over 20 percent of all East Texas sawtimber is produced on National Forest land. . . .

The [National Forests in Texas have] historically supplied three percent of the timber harvested in Texas." Gov't Ex. 243A, 1996 LRMP, at 16. The public, however, also has a compelling interest in proper forest management so that the forest resources are sustained in perpetuity and not permanently damaged. Congress had this public interest in mind when it enacted the Multiple-Use Sustained-Yield Act of 1960 ("MUSYA"). MUSYA requires (1) that the National Forests be managed for the "multiple use" of various renewable resources, including "recreation, range, timber, watershed, and wildlife and fish," and (2) that the "periodic output" of such resources be maintained "in perpetuity . . . without impairment of the productivity of the land." 16 U.S.C. § § 528, 529, 531. Accordingly, the court determines that the public interest would be served by an injunction that prevents ongoing substantial and permanent impairment of the forest land.

Upon determining that injunctive relief is appropriate, a court must carefully craft an injunction that reconciles any competing equities. "Injunctions must be narrowly drawn and precise." *Brown v. Petrolite Corp.*, 965 F.2d 38, 51 (5th Cir. 1992). The inadequate implementation of past timber sales is causing substantial and permanent damage to the soil and watershed resources (and perhaps wildlife as well for failure to monitor). The continued implementation of these past sales, however, could be modified to prevent further damage to the forest land. Under section 706(1) of the APA, the court could order mandatory injunctive relief to compel the Forest Service to immediately comply with the law. In deference to the Forest Service, however, the court will not order mandatory relief because it may unduly interfere with the Forest Service's management of the forest resources. The court is

concerned that the Forest Service may not have the funds appropriated to simultaneously comply with a mandatory injunction and continue to adequately manage other forest resources.

To prevent continuing substantial and permanent damage to the forest land, however, the court determines that it is necessary to enjoin future timber harvesting until such time that the Forest Service (1) complies with the NFMA and regulations with respect to the implementation of past timber sales and (2) assures the court that any future timber harvesting will be in compliance on-the-ground. Under current management practices, further timber harvesting would only exacerbate the continuing substantial and permanent damage to the forest land. Therefore, the court hereby ENJOINS the Federal Defendants and Timber Intervenors from engaging in timber harvesting under any method (even-aged or otherwise) unless such harvesting is for insect or disease control, fire protection, or any other reason necessary to maintain the health of the forest land. This injunction is effective immediately and binds all Defendants to this action as well as those (1) identified with them in interest, (2) in privity with them, (3) subject to their control, or (4) otherwise represented by them. *See Parker v. Ryan,* 960 F.2d 543, 546 (5th Cir. 1992). This injunction remains in effect until further order of the court. Defendants shall immediately serve actual notice of this injunction on all persons or entities engaged in timber harvesting in the National Forests in Texas. At any time, the parties may petition the court to modify the injunction.

By its findings of fact, conclusions of law, and judgment of declaratory and injunctive relief, the court is not

suggesting that the Forest Service is barred from using even-aged management after the injunction is lifted. Whatever the costs of choosing even-aged management over another system of management, Congress has determined that even-aged management may be used by the Forest Service under certain circumstances outlined in the NFMA. Additionally, the court is not suggesting that the Defendants cease any particular forest management practice or adopt another in its place. In most circumstances, the selection of particular forest management practices under the NFMA and regulations is left to the Forest Service's rational and informed discretion. Within this discretion, however, the Forest Service must ultimately comply with the NFMA and regulations.

As noted in *Sierra Club v. Espy,* 38 F.3d at 800, the National Forests are subject to multiple uses, and the NFMA does not require the maintenance of the status quo or a pristine environment. The National Forests are managed for obtaining a sustained yield of various resources, and of course the mix of forest resources changes, requiring at times trading one resource for another in a particular area of the forest. In making these trade-offs, however, the Forest Service cannot substantially and permanently damage the productivity of the forest land. Regrettably, the evidence at trial showed that past and continuing on-the-ground management practices of implementing timber sales has substantially and permanently damaged the soil and watershed resources.

The Forest Service has a difficult task managing the forest lands in a way that sustains a yield of all key forest resources. Compliance with the NFMA and regulations is not easy, but it is necessary to ensure a sustained yield of forest resources in perpetuity for the public good. The Forest

Service indicated at trial that it is operating under budgetary constraints and "very shorthanded." R. 805/21, 1039/18-25, 1382/11-16. But, with sufficient agency resources, the court is confident that the Forest Service can bring its on-the-ground management into compliance. At trial, the court observed that the Forest Service professionals who testified were competent and knowledgeable about forest management. The court's determination that the Forest Service has violated the NFMA and regulations should not necessarily reflect on the performance of any particular individual within the Forest Service.

POST JUDGMENT MATTERS

The court will sign a judgment consistent with this opinion and order. The court instructs the Clerk of Court to enter the judgment on the docket on August 14, 1997. By the court's calculation, the parties' post-judgment motions are due August 28, 1997. Along with any post-judgment motions the parties may wish to file, the parties are hereby ORDERED to submit briefing on the following issues: (1) scope of the current injunction and any necessary modification thereof and (2) appointment of a master under FED. R. CIV. P. 53 or expert under FED. R. EVID. 706 (including the issues of shifting costs to Defendants). The court anticipates that a master or expert may be necessary once the Federal Defendants move to demonstrate compliance with the law and to lift the injunction. The court anticipates holding a hearing once the parties submit post-judgment briefing to the court.

Under Rule 54(b), the court expressly determines that there is no just reason to delay an entry of final judgment as to the claims determined in this opinion and order.

SIGNED this the 14th day of August 1997.

/s/_____
RICHARD A. SCHELL
UNITED STATES DISTRICT JUDGE

APPENDIX D

IN THE UNITED STATES COURT OF APPEALS FOR THE FIFTH CIRCUIT

[Filed November 21, 2000]

No. 97-41274

SIERRA CLUB; WILDERNESS SOCIETY; TEXAS COMMITTEE ON NATURAL RESOURCES,
Plaintiffs - Appellees,

v.

R. MAX PETERSON; et al.,
Defendants,

DANIEL GLICKMAN, In his official capacity as the Secretary of the Department of Agriculture; ELIZABETH ESTILL, In her official capacity as the Regional Forester, U.S. Forest Service, Region 8; MICHAEL DOMBECK, In his official capacity as Chief, U.S. Forest Service; RONALD RAUM, In his official capacity as the Forest Supervisor, National Forests and Grasslands in Texas,
Defendants - Appellants,

TEXAS FORESTRY ASSOCIATION; SOUTHERN TIMBER PURCHASERS

COUNCIL,)
Intervenor - Defendants - Appellants)
)

Appeals from the United States District Court for the Eastern District of Texas, Lufkin

ON PETITION FOR REHEARING

Before POLITZ, JOLLY, HIGGINBOTHAM, DAVIS, JONES, SMITH, WIENER, BARKSDALE, EMILIO M. GARZA, BENAVIDES, STEWART, AND DENNIS, Circuit Judges.

EMILIO M. GARZA, Circuit Judge:

IT IS ORDERED that the petition for rehearing is denied.

ENTERED FOR THE COURT:

/s/_____
United States Circuit Judge

APPENDIX E

STATUTES AND REGULATIONS INVOLVED

16 U.S.C. § 1604
National Forest System land and resource management plans

(a) Development, maintenance, and revision by Secretary of Agriculture as part of program; coordination

As a part of the Program provided for by section 1602 of this title, the Secretary of Agriculture shall develop, maintain, and, as appropriate, revise land and resource management plans for units of the National Forest System, coordinated with the land and resource management planning processes of State and local governments and other Federal agencies.

(b) Criteria

In the development and maintenance of land management plans for use on units of the National Forest System, the Secretary shall use a systematic interdisciplinary approach to achieve integrated consideration of physical, biological, economic, and other sciences.

(c) Incorporation of standards and guidelines by Secretary; time of completion; progress reports; existing management plans

The Secretary shall begin to incorporate the standards and guidelines required by this section in plans for units of the National Forest System as soon as practicable after October 22, 1976 and shall attempt to complete such incorporation for

all such units by no later than September 30, 1985. The Secretary shall report to the Congress on the progress of such incorporation in the annual report required by section 1606(c) of this title. Until such time as a unit of the National Forest System is managed under plans developed in accordance with this subchapter, the management of such unit may continue under existing land and resource management plans.

(d) Public participation in management plans; availability of plans; public meetings

The Secretary shall provide for public participation in the development, review, and revision of land management plans including, but not limited to, making the plans or revisions available to the public at convenient locations in the vicinity of the affected unit for a period of at least three months before final adoption, during which period the Secretary shall publicize and hold public meetings or comparable processes at locations that foster public participation in the review of such plans or revisions.

(e) Required assurances

In developing, maintaining, and revising plans for units of the National Forest System pursuant to this section, the Secretary shall assure that such plans–

(1) provide for multiple use and sustained yield of the products and services obtained therefrom in accordance with the Multiple-Use Sustained-Yield Act of 1960 [16 U.S.C.A. §§ 528-531], and, in particular, include coordination of outdoor recreation, range, timber, watershed, wildlife and fish, and wilderness; and

(2) determine forest management systems, harvesting levels, and procedures in the light of all of the uses set forth in subsection (c)(1) of this section, the definition of the terms "multiple use" and "sustained yield' as provided in the Multiple-Use Sustained-Yield Act of 1960, and the

availability of lands and their suitability for resource management.

(f) Required provisions

Plans developed in accordance with this section shall–

(1) form one integrated plan for each unit of the National Forest System, incorporating in one document or one set of documents, available to the public at convenient locations, all of the features required by this section;

(2) be embodied in appropriate written material, including maps and other descriptive documents, reflecting proposed and possible actions, including the planned timber sale program and the proportion of probable methods of timber harvest within the unit necessary to fulfill the plan;

(3) be prepared by an interdisciplinary team. Each team shall prepare its plan based on inventories of the applicable resources of the forest;

(4) be amended in any manner whatsoever after final adoption after public notice, and, if such amendment would result in a significant change in such plan, in accordance with the provisions of subsections (e) and (f) of this section and public involvement comparable to that required by subsection (d) of this section; and

(5) be revised (A) from time to time when the Secretary finds conditions in a unit have significantly changed, but at least every fifteen years, and (B) in accordance with the provisions of subsections (e) and (f) of this section and public involvement comparable to that required by subsection (d) of this section.

(g) Promulgation of regulations for development and revision of plans; environmental considerations; resource management guidelines; guidelines for land management plans

As soon as practicable, but not later than two years after October 22, 1976, the Secretary shall in accordance with

the procedures set forth in section 553 of Title 5 promulgate regulations, under the principles of the Multiple-Use Sustained-Yield Act of 1960 [16 U.S.C.A. §§ 528 to 531], that set out the process for the development and revision of the land management plans, and the guidelines and standards prescribed by this subsection. The regulations shall include, but not be limited to–

(1) specifying procedures to insure that land management plans are prepared in accordance with the National Environmental Policy Act of 1969 [42 U.S.C.A. § 4321 et seq.], including, but not limited to, direction on when and for what plans an environmental impact statement required under section 102(2)(C) of that Act [42 U.S.C.A. § 4332(2)(C)] shall be prepared;

(2) specifying guidelines which–

(A) require the identification of the suitability of lands for resource management;

(B) provide for obtaining inventory data on the various renewable resources, and soil and water, including pertinent maps, graphic material, and explanatory aids; and

(C) provide for methods to identify special conditions or situations involving hazards to the various resources and their relationship to alternative activities;

(3) specifying guidelines for land management plans developed to achieve the goals of the Program which–

(A) insure consideration of the economic and environmental aspects of various systems of renewable resource management, including the related systems of silviculture and protection of forest resources, to provide for outdoor recreation (including wilderness), range, timber, watershed, wildlife, and fish;

(B) provide for diversity of plant and animal communities based on the suitability and capability of the

specific land area in order to meet overall multiple-use objectives, and within the multiple-use objectives of a land management plan adopted pursuant to this section, provide, where appropriate, to the degree practicable, for steps to be taken to preserve the diversity of tree species similar to that existing in the region controlled by the plan;

(C) insure research on and (based on continuous monitoring and assessment in the field) evaluation of the effects of each management system to the end that it will not produce substantial and permanent impairment of the productivity of the land;

(D) permit increases in harvest levels based on intensified management practices, such as reforestation, thinning, and tree improvement if (i) such practices justify increasing the harvests in accordance with the Multiple-Use Sustained-Yield Act of 1960, and (ii) such harvest levels are decreased at the end of each planning period if such practices cannot be successfully implemented or funds are not received to permit such practices to continue substantially as planned;

(E) insure that timber will be harvested from National Forest System lands only where–

(i) soil, slope, or other watershed conditions will not be irreversibly damaged;

(ii) there is assurance that such lands can be adequately restocked within five years after harvest;

(iii) protection is provided for streams, streambanks, shorelines, lakes, wetlands, and other bodies of water from detrimental changes in water temperatures, blockages of water courses, and deposits of sediment, where harvests are likely to seriously and adversely affect water conditions or fish habitat; and

(iv) the harvesting system to be used is not selected primarily because it will give the greatest dollar return or the

greatest unit output of timber; and

(F) insure that clearcutting, seed tree cutting, shelterwood cutting, and other cuts designed to regenerate an even-aged stand of timber will be used as a cutting method on National Forest System lands only where–

(i) for clearcutting, it is determined to be the optimum method, and for other such cuts it is determined to be appropriate, to meet the objectives and requirements of the relevant land management plan;

(ii) the interdisciplinary review as determined by the Secretary has been completed and the potential environmental, biological, esthetic, engineering, and economic impacts on each advertised sale area have been assessed, as well as the consistency of the sale with the multiple use of the general area;

(iii) cut blocks, patches, or strips are shaped and blended to the extent practicable with the natural terrain;

(iv) there are established according to geographic areas, forest types, or other suitable classifications the maximum size limits for areas to be cut in one harvest operation, including provision to exceed the established limits after appropriate public notice and review by the responsible Forest Service officer one level above the Forest Service officer who normally would approve the harvest proposal: Provided, That such limits shall not apply to the size of areas harvested as a result of natural catastrophic conditions such as fire, insect and disease attack, or windstorm; and

(v) such cuts are carried out in a manner consistent with the protection of soil, watershed, fish, wildlife, recreation, and esthetic resources, and the regeneration of the timber resource.

(h) Scientific committee to aid in promulgation of regulations; termination; revision committees; clerical and

technical assistance; compensation of committee members

(1) In carrying out the purposes of subsection (g) of this section, the Secretary of Agriculture shall appoint a committee of scientists who are not officers or employees of the Forest Service. The committee shall provide scientific and technical advice and counsel on proposed guidelines and procedures to assure that an effective interdisciplinary approach is proposed and adopted. The committee shall terminate upon promulgation of the regulations, but the Secretary may, from time to time, appoint similar committees when considering revisions of the regulations. The views of the committees shall be included in the public information supplied when the regulations are proposed for adoption.

(2) Clerical and technical assistance, as may be necessary to discharge the duties of the committee, shall be provided from the personnel of the Department of Agriculture.

(3) While attending meetings of the committee, the members shall be entitled to receive compensation at a rate of $100 per diem, including traveltime, and while away from their homes or regular places of business they may be allowed travel expenses, including per diem in lieu of subsistence, as authorized by section 5703 of Title 5 for persons in the Government service employed intermittently.

(i) Consistency of resource plans, permits, contracts, and other instruments with land management plans; revision

Resource plans and permits, contracts, and other instruments for the use and occupancy of National Forest System lands shall be consistent with the land management plans. Those resource plans and permits, contracts, and other such instruments currently in existence shall be revised as soon as practicable to be made consistent with such plans. When land management plans are revised, resource plans and

permits, contracts, and other instruments, when necessary, shall be revised as soon as practicable. Any revision in present or future permits, contracts, and other instruments made pursuant to this section shall be subject to valid existing rights.

(j) Effective date of land management plans and revisions

Land management plans and revisions shall become effective thirty days after completion of public participation and publication of notification by the Secretary as required under subsection (d) of this section.

(k) Development of land management plans

In developing land management plans pursuant to this subchapter, the Secretary shall identify lands within the management area which are not suited for timber production, considering physical, economic, and other pertinent factors to the extent feasible, as determined by the Secretary, and shall assure that, except for salvage sales or sales necessitated to protect other multiple-use values, no timber harvesting shall occur on such lands for a period of 10 years. Lands once identified as unsuitable for timber production shall continue to be treated for reforestation purposes, particularly with regard to the protection of other multiple-use values. The Secretary shall review his decision to classify these lands as not suited for timber production at least every 10 years and shall return these lands to timber production whenever he determines that conditions have changed so that they have become suitable for timber production.

* * * *

(m) Establishment of standards to ensure culmination of mean annual increment of growth; silvicultural practices; salvage harvesting; exceptions

36 C.F.R. § 219.3
Definitions and terminology.

For purposes of this subpart the following terms, respectively, shall mean:

Allowable sale quantity: The quantity of timber that may be sold from the area of suitable land covered by the forest plan for a time period specified by the plan. This quantity is usually expressed on an annual basis as the "average annual allowable sale quantity."

Base sale schedule: A timber sale schedule formulated on the basis that the quantity of timber planned for sale and harvest for any future decade is equal to or greater than the planned sale and harvest for the preceding decade, and this planned sale and harvest for any decade is not greater than the long-term sustained yield capacity.

Biological growth potential: The average net growth attainable in a fully stocked natural forest stand.

Capability: The potential of an area of land to produce resources, supply goods and services, and allow resource uses under an assumed set of management practices and at a given level of management intensity. Capability depends upon current conditions and site conditions such as climate, slope, landform, soils, and geology, as well as the application of management practices, such as silviculture or protection from fire, insects, and disease.

Corridor: A linear strip of land identified for the present or future location of transportation or utility rights-of-way within its boundaries.

Cost efficiency: The usefulness of specified inputs (costs) to produce specified outputs (benefits). In measuring cost efficiency, some outputs, including environmental, economic, or social impacts, are not assigned monetary values

but are achieved at specified levels in the least cost manner. Cost efficiency is usually measured using present net value, although use of benefit-cost ratios and rates-of-return may be appropriate.

Diversity: The distribution and abundance of different plant and animal communities and species within the area covered by a land and resource management plan.

Even-aged management: The application of a combination of actions that results in the creation of stands in which trees of essentially the same age grow together. Managed even-aged forests are characterized by a distribution of stands of varying ages (and, therefore, tree sizes) throughout the forest area. The difference in age between trees forming the main canopy level of a stand usually does not exceed 20 percent of the age of the stand at harvest rotation age. Regeneration in a particular stand is obtained during a short period at or near the time that a stand has reached the desired age or size for regeneration and is harvested. Clearcut, shelterwood, or seed tree cutting methods produce even-aged stands.

Forest land: Land at least 10 percent occupied by forest trees of any size or formerly having had such tree cover and not currently developed for non-forest use. Lands developed for non-forest use include areas for crops, improved pasture, residential, or administrative areas, improved roads of any width, and adjoining road clearing and powerline clearing of any width.

Goal: A concise statement that describes a desired condition to be achieved sometime in the future. It is normally expressed in broad, general terms and is timeless in that it has no specific date by which it is to be completed. Goal statements form the principal basis from which objectives are developed.

Goods and services: The various outputs, including on-site uses, produced from forest and rangeland resources.

Integrated pest management: A process for selecting strategies to regulate forest pests in which all aspects of a pest-host system are studied and weighed. The information considered in selecting appropriate strategies includes the impact of the unregulated pest population on various resources values, alternative regulatory tactics and strategies, and benefit/cost estimates for these alternative strategies. Regulatory strategies are based on sound silvicultual practices and ecology of the pest-host system and consist of a combination of tactics such as timber stand improvement plus selective use of pesticides. A basic principle in the choice of strategy is that it be ecologically compatible or acceptable.

Long-term sustained-yield timber capacity: The highest uniform wood yield from lands being managed for timber production that may be sustained under a specified management intensity consistent with multiple-use objectives.

Management concern: An issue, problem, or a condition which constrains the range of management practices identified by the Forest Service in the planning process.

Management direction: A statement of multiple-use and other goals and objectives, the associated management prescriptions, and standards and guidelines for attaining them.

Management intensity: A management practice or combination of management practices and associated costs designed to obtain different levels of goods and services.

Management practice: A specific activity, measure, course of action, or treatment.

Management prescription: Management practices and intensity selected and scheduled for application on a specific area to attain multiple-use and other goals and objectives.

Multiple use: The management of all the various

renewable surface resources of the National Forest System so that they are utilized in the combination that will best meet the needs of the American people; making the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions; that some lands will be used for less than all of the resources; and harmonious and coordinated management of the various resources, each with the other, without impairment of the productivity of the land, with consideration being given to the relative values of the various resources, and not necessarily the combination of uses that will give the greatest dollar return or the greatest unit output.

Net public benefits: An expression used to signify the overall long-term value to the nation of all outputs and positive effects (benefits) less all associated inputs and negative effects (costs) whether they can be quantitatively valued or not. Net public benefits are measured by both quantitative and qualitative criteria rather than a single measure or index. The maximization of net public benefits to be derived from management of units of the National Forest System is consistent with the principles of multiple use and sustained yield.

Objective: A concise, time-specific statement of measurable planned results that respond to pre-established goals. An objective forms the basis for further planning to define the precise steps to be taken and the resources to be used in achieving identified goals.

Planning area: The area of the National Forest System covered by a regional guide or forest plan.

Planning period: One decade. The time interval within the planning horizon that is used to show incremental changes in yields, costs, effects, and benefits.

Planning horizon: The overall time period considered in the planning process that spans all activities covered in the analysis or plan and all future conditions and effects of proposed actions which would influence the planning decisions.

Present net value: The difference between the discounted value (benefits) of all outputs to which monetary values or established market prices are assigned and the total discounted costs of managing the planning area.

Public issue: A subject or question of widespread public interest relating to management of the National Forest System.

Real dollar value: A monetary value which compensates for the effects of inflation.

Receipt shares: The portion of receipts derived from Forest Service resource management that is distributed to State and county governments, such as the Forest Service 25 percent fund payments.

Responsible line officer: The Forest Service employee who has the authority to select and/or carry out a specific planning action.

Sale schedule: The quantity of timber planned for sale by time period from an area of suitable land covered by a forest plan. The first period, usually a decade, of the selected sale schedule provides the allowable sale quantity. Future periods are shown to establish that long-term sustained yield will be achieved and maintained.

Silvicultural system: A management process whereby forests are tended, harvested, and replaced, resulting in a forest of distinctive form. Systems are classified according to the method of carrying out the fellings that remove the mature crop and provide for regeneration and according to the type of forest thereby produced.

Suitability: The appropriateness of applying certain resource management practices to a particular area of land, as determined by an analysis of the economic and environmental consequences and the alternative uses foregone. A unit of land may be suitable for a variety of individual or combined management practices.

Sustained-yield of products and services: The achievement and maintenance in perpetuity of a high-level annual or regular periodic output of the various renewable resources of the National Forest System without impairment of the productivity of the land.

Timber production: The purposeful growing, tending, harvesting, and regeneration of regulated crops of trees to be cut into logs, bolts, or other round sections for industrial or consumer use. For purposes of this sub-part, the term *timber production* does not include production of fuelwood.

Uneven-aged management: The application of a combination of actions needed to simultaneously maintain continuous high-forest cover, recurring regeneration of desirable species, and the orderly growth and development of trees through a range of diameter or age classes to provide a sustained yield of forest products. Cutting is usually regulated by specifying the number or proportion of trees of particular sizes to retain within each area, thereby maintaining a planned distribution of size classes. Cutting methods that develop and maintain uneven-aged stands are single-tree selection and group selection.

36 C.F.R. § 219.11
Forest plan content.

The forest plan shall contain the following:

(a) A brief summary of the analysis of the

management situation, including demand and supply conditions for resource commodities and services, production potentials, and use and development opportunities;

(b) Forest multiple-use goals and objectives that include a description of the desired future condition of the forest or grassland and an identification of the quantities of goods and services that are expected to be produced or provided during the RPA planning periods;

(c) Multiple-use prescriptions and associated standards and guidelines for each management area including proposed and probable management practices such as the planned timber sale program; and

(d) Monitoring and evaluation requirements that will provide a basis for a periodic determination and evaluation of the effects of management practices.

36 C.F.R. § 219.12
Forest planning–process.

(a) *General requirements*. The preparation, revision, or significant amendment of a forest plan shall comply with the requirements established in this section. The planning process includes at least those actions set forth in paragraphs (b) through (k) of the section. Some actions may occur simultaneously, and it may be necessary to repeat an action as additional information becomes available. The environmental impact statement for each forest plan shall be prepared according to NEPA procedures. To the extent feasible, a single process shall be used to meet planning and NEPA requirements.

(b) *Identification of purpose and need*. The interdisciplinary team shall identify and evaluate public issues, management concerns, and resource use and

development opportunities, including those identified throughout the planning process during public participation actictivities and coordination with other Federal agencies, State and local governments, and Indian tribes. The Forest Supervisor shall determine the major public issues, management concerns, and resource use and development opportunities to be addressed in the planning process.

(c) *Planning criteria*. Criteria shall be prepared to guide the planning process. Criteria apply to collection and use of inventory data and information, analysis of the management situation, and the design, formulation, and evaluation of alternatives. Criteria designed to achieve the objective of maximizing net public benefits shall be included. Specific criteria may be derived from–

(1) Laws, Executive Orders, regulations, and agency policy as set forth in the Forest Service Manual;

(2) Goals and objectives in the RPA Program and regional guides;

(3) Recommendations and assumptions developed from public issues, management concerns, and resource use and development opportunities;

(4) The plans and programs of other Federal agencies, State and local governments, and Indian tribes;

(5) Ecological, technical, and economic factors; and

(6) The resource integration and management requirements in §§ 219.13 through 219.27.

(d) *Inventory data and infomation collection*. Each Forest Supervisor shall obtain and keep current inventory data appropriate for planning and managing the resources under his or her administrative jurisdiction. The Supervisor will assure that the interdisciplinary team has access to the best available data. This may require that special inventories or studies be

prepared. The interdisciplinary team shall collect, assemble, and use data, maps, graphic material, and explanatory aids, of a kind, character, and quality, and to the detail appropriate for the management decisions to be made. Data and information needs may vary as planning problems develop from identification of public issues, management concerns, and resource use and development opportunities. Data shall be stored for ready retrieval and comparison and periodically shall be evaluated for accuracy and effectiveness. The interdisciplinary team will use common data definitions and standards established by the Chief of the Forest Service to assure uniformity of information between all planning levels. As information is recorded, it shall be applied in any subsequent planning process. Information developed according to common data definitions and standards shall be used in the preparation of the 1990, and subsequent RPA Assessments and RPA Programs.

36 C.F.R. § 219.19
Fish and wildlife resource

Fish and wildlife habitat shall be managed to maintain viable populations of existing native and desired non-native vertebrate species in the planning area. For planning purposes, a viable population shall be regarded as one which has the estimated numbers and distribution of reproductive individuals to insure its continued existence is well distributed in the planning area. In order to insure that viable populations will be maintained, habitat must be provided to support, at least, a minimum number of reproductive individuals and that habitat must be well distributed so that those individuals can interact with others in the planning area.

(a) Each alternative shall establish objectives for

the maintenance and improvement of habitat for management indicator species selected under paragraph (g)(1) of this section, to the degree consistent with overall multiple use objectives of the alternative. To meet this goal, management planning for the fish and wildlife resource shall meet the requirements set forth in paragraphs (a)(1) through (a)(7) of this section.

(1) In order to estimate the effects of each alternative on fish and wildlife populations, certain vertebrate and/or invertebrate species present in the area shall be identified and selected as management indicator species and the reasons for their selection will be stated. These species shall be selected because their population changes are believed to indicate the effects of management activities. In the selection of management indicator species, the following categories shall be represented where appropriate: Endangered and threatened plant and animal species identified on State and Federal lists for the planning area; species with special habitat needs that may be influenced significantly by planned management programs; species commonly hunted, fished, or trapped; non-game species of special interest; and additional plant or animal species selected because their population changes are believed to indicate the effects of management activities on other species of selected major biological communities or on water quality. On the basis of available scientific information, the interdisciplinary team shall estimate the effects of changes in vegetation type, timber age classes, community composition, rotation age, and year-long suitability of habitat related to mobility of management indicator species. Where appropriate, measures to mitigate adverse effects shall be prescribed.

(2) Planning alternatives shall be stated and evaluated in terms of both amount and quality of habitat and

of animal population trends of the management indicator species.

(3) Biologists from State fish and wildlife agencies and other Federal agencies shall be consulted in order to coordinate planning for fish and wildlife, including opportunities for the reintroduction of extirpated species.

(4) Access and dispersal problems of hunting, fishing, and other visitor uses shall be considered.

(5) The effects of pest and fire management on fish and wildlife populations shall be considered.

(6) Population trends of the management indicator species will be monitored and relationships to habitat changes determined. This monitoring will be done in cooperation with State fish and wildlife agencies, to the extent practicable,

(7) Habitat determined to be critical for threatened and endangered species shall be identified, and measures shall be prescribed to prevent the destruction or adverse modification of such habitat. Objectives shall be determined for threatened and endangered species that shall provide for, where possible, their removal from listing as threatened and endangered species through appropriate conservation measures, including the designation of special areas to meet the protection and management needs of such species.

36 C.F.R. § 219.21
Recreation resource.

To the degree consistent with needs and demands for all major resources, a broad spectrum of forest and rangeland related outdoor recreation opportunities shall be provided for in each alternative. Planning activities to achieve this shall be in accordance with national and regional direction and procedural requirements of paragraphs (a) through (g) of this

section.

(a) Forest planning shall identify–

(1) The physical and biological characteristics that make land suitable for recreation opportunities;

(2) The recreational preferences of user groups and the settings needed to provide quality recreation opportunities; and

(3) Recreation opportunities on the National Forest System lands.

(b) The supply of developed recreational facilities in the area of National Forest influence shall be appraised for adequacy to meet present and future demands.

(c) Planning alternatives shall include consideration of establishment of physical facilities, regulation of use, and recreation opportunities responsive to current and anticipated user demands.

(d) In formulation and analysis of alternatives as specified in § 219.12 (f) and (g), interactions among recreation opportunities and other multiple uses shall be examined. This examination shall consider the impacts of the proposed recreation activities on other uses and values and the impacts of other uses and activities associated with them on recreation opportunities, activities, and quality of experience.

(e) Formulation and evaluation of alternatives under paragraphs (c) and (d) of this section shall be coordinated to the extent feasible with present and proposed recreation activities of local and State land use or outdoor recreation plans, particularly the State Comprehensive Outdoor Recreation plan, and recreation opportunities already present and available on other public and private lands, with the aim of reducing duplication in meeting recreation demands.

(f) The visual resource shall be inventoried and evaluated as an integrated part of evaluating alternatives in the

forest planning process, addressing both the landscape's visual attractiveness and the public's visual expectation. Management prescriptions for definitive land areas of the forest shall include visual quality objectives.

(g) Off-road vehicle use shall be planned and implemented to protect land and other resources, promote public safety, and minimize conflicts with other uses of the National Forest System lands. Forest planning shall evaluate the potential effects of vehicle use off roads and, on the basis of the requirements of 36 CFR part 295 of this chapter, classify areas and trails of National Forest System lands as to whether or not off-road vehicle use may be prermitted.

36 C.F.R. § 219.26
Diversity.

Forest planning shall provide for diversity of plant and animal communities and tree species consistent with the overall multiple-use objectives of the planning area. Such diversity shall be considered throughout the planning process. Inventories shall include quantitative data making possible the evaluation of diversity in terms of its prior and present condition. For each planning alternative, the interdisciplinary team shall consider how diversity will be affected by various mixes of resource outputs and uses, including proposed management practices. (Refer to § 219.27(g).)

36 C.F.R. § 219.27
Management requirements.

The minimum specific management requirements to be met in accomplishing goals and objectives for the National Forest System are set forth in this section. These requirements

guide the development, analysis, approval, implementation, monitoring and evaluation of forest plans.

(a) *Resource protection.* All management prescriptions shall–

(1) Conserve soil and water resources and not allow significant or permanent impairment of the productivity of the land;

(2) Consistent with the relative resource values involved, minimize serious or long-lasting hazards from flood, wind, wildfire, erosion, or other natural physical forces unless these are specifically excepted, as in wilderness;

(3) Consistent with the relative resource values involved, prevent or reduce serious, long lasting hazards and damage from pest organisms, utilizing principles of integrated pest management. Under this approach all aspects of a pest-host system should be weighed to determine situation-specific prescriptions which may utilize a combination of techniques including, as appropriate, natural controls, harvesting use of resistant species, maintenance of diversity, removal of damaged trees, and judicious use of pesticides. The basic principle in the choice of strategy is that, in the long term, it be ecologically acceptable and compatible with the forest ecosystem and the multiple use objectives of the plan;

(4) Protect streams, streambanks, shorelines, lakes, wetlands, and other bodies of water as provided under paragraphs (d) and (e) of this section;

(5) Provide for and maintain diversity of plant and animal communities to meet overall multiple-use objectives, as provided in paragraph (g) of this section;

(6) Provide for adequate fish and wildlife habitat to maintain viable populations of existing native vertebrate species and provide that habitat for species chosen under §219.19 is maintained and improved to the degree consistent

with multiple-use objectives established in the plan;

(7) Be assessed prior to project implementation for potential physical, biological, aesthetic, cultural, engineering, and economic impacts and for consistency with multiple uses planned for the general area;

(8) Include measures for preventing the destruction or adverse modification of critical habitat for threatened and endangered species;

(9) Provide that existing significant transportation and utility corridors and other significant right-of-ways that are capable and likely to be needed to accommodate the facility or use from an additional compatible right-of-way be designated as a right-of-way corridor. Subsequent right-of-way grants will, to the extent practicable, and as determined by the responsible line officer, use designated corridors;

(10) Ensure that any roads constructed through contracts, permits, or leases are designed according to standards appropriate to the planned uses, considering safety, cost of transportation, and effects upon lands and resources;

(11) Provide that all roads are planned and designed to re-establish vegetative cover on the disturbed area within a reasonable period of time, not to exceed 10 years after the termination of a contract, lease or permit, unless the road is determined necessary as a permanent addition to the National Forest Transportation System; and

(12) Be consistent with maintaining air quality at a level that is adequate for the protection and use of National Forest System resources and that meets or exceeds applicable Federal, State and/or local standards or regulation.

(b) *Vegetative manipulation.* Management prescriptions that involve retentive manipulation of tree cover for any purpose shall–

(1) Be best suited to the multiple-use goals established

for the area with potential environmental, biological, cultural resource, aesthetic, engineering, and economic impacts, as stated in the regional guides and forest plans, being considered in this determination;

(2) Assure that lands can be adequately restocked as provided in paragraph (c)(3) of this section, except where permanent openings are created for wildlife habitat improvement, vistas, recreation uses and similar practices;

(3) Not be chosen primarily because they will give the greatest dollar return or the greatest output of timber, although these factors shall be considered;

(4) Be chosen after considering potential effects on residual trees and adjacent stands;

(5) Avoid permanent impairment of site productivity and ensure conservation of soil and water resources;

(6) Provide the desired effects on water quantity and quality, wildlife and fish habitat, regeneration of desired tree species, forage production, recreation uses, aesthetic values, and other resource yields; and

(7) Be practical in terms of transportation and harvesting requirements, and total costs of preparation, logging, and administration.

(c) *Silvicultural practices*. The following management requirements apply to timber harvest and cultural treatments:

(1) No timber harvesting shall occur on lands classified as not suited for timber production pursuant to § 219.14 except for salvage sales, sales necessary to protect other multiple-use values or activities that meet other objectives on such lands if the forest plan establishes that such actions are appropriate. These lands shall continue to be treated for reforestation purposes if necessary to achieve the multiple-use objectives of the plan.

(2) The selected sale schedule provides the allowable

sale quantity for the first planning period. Within the planning period, the volume of timber to be sold in any one year may exceed the average annual allowable sale quantity so long as the total amount sold for the planning period does not exceed the allowable sale quantity. Nothing in this paragraph prohibits salvage or sanitation harvesting of timber stands which are substantially damaged by fire, windthrow, or other catastrophe, or which are in imminent danger of insect or disease attack and where such harvests are consistent with silvicultural and environmental standards. Such timber may either substitute for timber that would otherwise be sold under the plan or, if not feasible, be sold over and above the planned volume.

(3) When trees are cut to achieve timber production objectives, the cuttings shall be made in such a way as to assure that the technology and knowledge exists to adequately restock the lands within 5 years after final harvest. Research and experience shall be the basis for determining whether the harvest and regeneration practices planned can be expected to result in adequate restocking. Adequate restocking means that the cut area will contain the minimum number, size, distribution, and species composition of regeneration as specified in regional silvicultural guides for each forest type. Five years after final harvest means 5 years after clearcutting, 5 years after final overstory removal in shelterwood cutting, 5 years after the seed tree removal cut in seed tree cutting, or 5 years after selection cutting.

(4) Cultural treatments such as thinning, weeding, and other partial cutting may be included in the forest plan where they are intended to increase the rate of growth of remaining trees, favor commercially valuable tree species, favor species or age classes which are most valuable for wildlife, or achieve other multiple-use objectives.

(5) Harvest levels based on intensified management practices shall be decreased no later than the end of each planning period if such practices cannot be completed substantially as planned.

(6) Timber harvest cuts designed to regenerate an even-aged stand of timber shall be carried out in a manner consistent with the protection of soil, watershed, fish and wildlife, recreation, and aesthetic resources, and the regeneration of the timber resource.

(7) Timber harvest and other silvicultural treatments shall be used to prevent potentially damaging population increases of forest pest organisms. Silvicultural treatments shall not be applied where such treatments would make stands susceptible to pest-caused damage levels inconsistent with management objectives.

(d) *Even-aged management*. When openings are created in the forest by the application of even-aged silviculture, the following management requirements apply:

(1) Openings shall be located to achieve the desired combination of multiple-use objectives. The blocks or strips cut shall be shaped and blended with the natural terrain, to the extent practicable, to achieve aesthetic, wildlife habitat, or other objectives established in the plan. Regional guides shall provide guidance on dispersion of openings in relation to topography, climate, geography, local land use patterns, forest types or other factors. As a minimum, openings in forest stands are no longer considered openings once a new forest is established. Forest plans may set forth variations to this minimum based on site-specific requirements for achieving multiple-use objectives. Regional guides shall provide guidance for determining variations to this minimum in the forest plan, based on requirements for watershed, wildlife habitat, scenery or other resource protection needs,

or other factors.

(2) Individual cut blocks, patches, or strips shall conform to the maximum size limits for areas to be cut in one harvest operation established by the regional guide according to geographic areas and forest types. This limit may be less than, but will not exceed, 60 acres for the Douglas-fir forest type of California, Oregon, and Washington; 80 acres for the southern yellow pine types of Alabama, Arkansas, Georgia, Florida, Louisiana, Mississippi, North Carolina, South Carolina, Oklahoma, and Texas; 100 acres for the hemlocksitka spruce forest type of coastal Alaska; and 40 acres for all other forest types except as provided in paragraphs (d)(2)(i) through (iii) of this section:

(i) Cut openings larger than those specified may be permitted where larger units will produce a more desirable combination of net public benefits. Such exceptions shall be provided for in regional guides. The following factors shall be considered in evaluating harvest cuts of various sizes and shapes to determine size limits by geographic areas and forest types: Topography; relationship of units to other natural or artificial openings and proximity of units; coordination and consistency with adjacent forests and regions; effect on water quality and quantity; visual absorption capability; effect on wildlife and fish habitat; regeneration requirements for desirable tree species based upon the latest research findings; transportation and harvesting system requirements; environmental and forest pest hazards to regeneration, residual trees, and surrounding stands; and the relative total costs of preparation and administration, transportation requirements, harvesting, site preparation, planting, stocking control, and future stand tending of harvest cuts of various sizes and shapes. Specification for exceptions shall include the particular conditions under which the larger size is permitted

and shall set a new maximum size permitted under those conditions.

(ii) Size limits exceeding those established in paragraphs (d)(2) and (d)(2)(i) of this section are permitted on an individual timber sale basis after 60 days' public notice and review by the Regional Forester.

(iii) The established limit shall not apply to the size of areas harvested as a result of natural catastrophic condition such as fire, insect and disease attack, or windstorm.

(e) *Riparian areas*. Special attention shall be given to land and vegetation for approximately 100 feet from the edges of all perennial streams, lakes, and other bodies of water. This area shall correspond to at least the recognizable area dominated by the riparian vegetation. No management practices causing detrimental changes in water temperature or chemical composition, blockages of water courses, or deposits of sediment shall be permitted within these areas which seriously and adversely affect water conditions or fish habitat. Topography, vegetation type, soil, climatic conditions, management objectives, and other factors shall be considered in determining what management practices may be performed within these areas or the constraints to be placed upon their performance.

(f) *Soil and water*. Conservation of soil and water resources involves the analysis, protection, enhancement, treatment, and evaluation of soil and water resources and their responses under management and shall be guided by instructions in official technical handbooks. These handbooks must show specific ways to avoid or mitigate damage, and maintain or enhance productivity on specific sites. These handbooks may be regional in scope or, where feasible, specific to physiographic or climatic provinces.

(g) *Diversity*. Management prescriptions, where

appropriate and to the extent practicable, shall preserve and enhance the diversity of plant and animal communities, including endemic and desirable naturalized plant and animal species, so that it is at least as great as that which would be expected in a natural forest and the diversity of tree species similar to that existing in the planning area. Reductions in diversity of plant and animal communities and tree species from that which would be expected in a natural forest, or from that similar to the existing diversity in the planning area, may be prescribed only where needed to meet overall multiple-use objectives. Planned type conversion shall be justified by an analysis showing biological, economic, social, and environmental design consequences, and the relation of such conversions to the process of natural change.

36 C.F.R. § 219.28
Research.

(a) Research needs for management of the National Forest System shall be identified during planning and periodically reviewed during evaluation of implemented plans. Particular attention should be given to research needs identified during the monitoring and evaluation described in § 219.12(k). These identified needs shall be included in formulating overall research programs and plans which involve private as well as public forest and rangelands.

(b) Research needed to support or improve management of the National Forest System shall be established and budgeted at the research station and national levels. Priorities for this portion of the Forest Service Research Program shall be based upon the information gathered at all planning levels of the National Forest System.

(c) An annual report shall be prepared at the national

level with assistance from Regions and Stations which shall include, but not be limited to, a description of the status of major research programs which address National Forest System needs for Research, significant findings, and how this information is to be or has recently been applied.

APPENDIX F

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF TEXAS
LUFKIN DIVISION

[Filed April 2, 1996]

Docket No. L-85-69-CA

SIERRA CLUB, ET AL,)
)
v.)
)
DAN GLICKMAN, ET AL.)
)

9am, April 2, 1996

Beaumont, Texas

TRANSCRIPT OF BENCH TRIAL BEFORE
THE HONORABLE RICHARD SCHELL, CHIEF JUDGE
UNITED STATES DISTRICT COURT

For the Plaintiff Texas Committee on Natural Resources:
Edward C. Fritz
Attorney
Texas Committee on Natural Resources
4144 Cochran Chapel Road
Dallas, Texas 75209

For the Defendants Glickman, et al:
Wells D. Burgess
Stephanie M. Parent
Lisa Holden
U.S. Department of Justice
Post Office Box 663
Washington, DC 20044

. . .

EXCERPT FROM THE OPENING STATEMENT OF WELLS D. BURGESS FOR THE FEDERAL DEFENDANTS

[Transcript of Bench Trial, Pages 10-11]

. . . And what we've done is we've made a decision to focus much of our testimony on a single even-age timber sale that we contend is generally typical of even-age timber sales on the forest. It will not be on every one, but it will be generally, and we'll explain what differences there are. This sale is not arbitrarily chosen, Your Honor, it's the sale in compartment 98. And the significance for this sale and the reason that we've chosen it for this sale is that the 98 sale was one of those sales that the Fifth Circuit has reviewed in connection with the appeal of the preliminary injunction. So this is one of the sales that the Fifth Circuit has ruled that the documentation for the sale is adequate. It also happened to be, I believe, when we were preparing the case, the only one of the sales which had been ruled on by the Fifth Circuit that had actually been harvested. So this sale has actually been harvested.

We will introduce testimony regarding how that was accomplished, what productive measures were implemented as part of that sale to see that the resource was protected, and also offer testimony by the experience of our folks in analogous situations of how we will project that sale will regenerate the forest on that acreage . . . .